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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 91

Washington, D. C. ▼ October, 1929

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1927 (NOS. 73050 TO 74212)

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INTRODUCTORY STATEMENT

During the period represented by this inventory David Fairchild continued his explorations of the countries on the West Coast of Africa, including the Gold Coast, Cameroon, Gambia, and French Guinea. Included in his collections were ornamental trees and shrubs and also a number of local varieties of fruits and vegetables, all tropical or subtropical in their requirements.

An interesting series of cotton varieties (*Gossypium* spp.; Nos. 73125 to 73137) was obtained in French West Africa by R. H. Forbes, Compagnie Générale des Colonies. The curator of the Lloyd Botanic Garden at Darjiling, India, G. H. Cave, presented a number of ornamental perennials and woody plants (Nos. 73140 to 73155) adapted for growing in the southern United States. A rather large collection of new or rare woody ornamentals (Nos. 73401 to 73450), largely from eastern Asia, was presented by Vicary Gibbs, Aldenham House Gardens, Herts, England. From the botanic garden at Tashkent, Turkestan, Russia, there were obtained seeds of a miscellaneous collection (Nos. 73595 to 73619, 73810 to 73819) of hardy fruits, vegetables, cereals, and ornamentals, which will be tested in the colder parts of the United States. A collection of seeds consisting chiefly of cereal varieties and also adapted for trial in the northern part of this country (Nos. 74023 to 74111) was presented by the bureau of introduction, Institute of Applied Botany, Leningrad, Russia.

The botanical determinations of introductions have been made and the nomenclature determined by H. C. Skeels, and the descriptive matter has been prepared under the direction of Paul Russell, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., January 30, 1929.

41436—29

SMITHSONIAN

INVENTORY[1]

73050 to 73056.

From Cape St. Mary, Gambia, West Africa. Seeds presented by Archibald J. Brooks, Director, Department of Agriculture, through H. N. Vinall, Bureau of Plant Industry. Received June 10, 1927.

73050 and 73051. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

73050. *Basso.* **73051.** *Kinto.*

73052 to 73055. PENNISETUM GLAUCUM (L.) R. Br. (*P. typhoideum* Rich.). Poaceae. **Pearl millet.**

73052. *Majyo.* **73054.** *Tanyo.*

73053. *Mor. fingo.* **73055.** *Tuno.*

73056. DIGITARIA EXILIS (Kippist) Stapf. Poaceae. **Fundi.**

Findo. A tropical African annual grass 18 inches high. The seeds are used by the natives as food.

For previous introduction see No. 55974.

73057 to 73059.

From Leningrad, Russia. Seeds presented by A. Kol, chief, bureau of introduction, Institute of Applied Botany, through J. W. Pincus, Amtorg Trading Corporation, New York, N. Y. Received June 7, 1927.

73057. BETULA ERMANI Champ. Betulaceae. **Birch.**

A tree up to 100 feet in height, with peeling, creamy white bark and orange-brown branches. Native to Manchuria, Chosen, and Japan. It is said to be liable to injury by spring frosts, owing to its habit of starting into early growth.

For previous introduction see No. 50289.

73058. SCHIZANDRA CHINENSIS (Turcz.) Baill. Magnoliaceae.

A hardy ornamental woody vine with compact bunches of small red berries.

For previous introduction see No. 65287.

73059. TILIA MANDSHURICA Rupr. and Maxim. Tiliaceae.

A very large-leaved linden which is locally used for making water troughs, barrels, and also beehives. It may be utilized in the colder parts of the United States as an ornamental park and shade tree.

For previous introduction see No. 57246.

73060. MEIBOMIA RENSONI Painter. Fabaceae.

From San Juan, Porto Rico. Seeds presented by O. W. Barrett, agricultural director, Department of Agriculture and Labor. Received June 10, 1927.

As described in the Revista de Agricultura Tropical, El Salvador, vol. 1, p. 65, the barajillo is a rapidly growing shrub native to the Republic of El Salvador at altitudes ranging from 2,000 to 4,000 feet. Under favorable conditions it sometimes becomes a small tree about 18 feet high. The trifoliate leaves are softly hairy and up to 3½ inches in length, and the small purplish flowers are borne in terminal racemes late in October. The roots of the barajillo are very large and penetrate deeply into the soil; the tubercles formed by the nitrogen-gathering bacteria are usually found only on the upper third of the root. All kinds of cattle are exceedingly fond of this plant; furthermore, it is capable of enduring prolonged drought and of thriving in very poor soil.

For previous introduction see No. 55446.

73061. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Rasikulu, Nadroga, Lautoka, Fiji Islands. Seeds presented by R. B. Howard. Received April 8, 1927.

Rahari. A variety grown in the Fiji Islands.

73062. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Bolivia. Tubers of unknown origin received through the Federal Horticultural Board, May 20, 1927.

A yellow-fleshed variety.

73063 and 73064.

From China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received February 24, 1927. Numbered June, 1927.

73063. CUDRANIA sp. Moraceae.

No. 972. Near Lungnamki, December 19, 1926. A thorny shrub 3 meters high, producing abundant clusters of golden-yellow fruits.

73064. EUGENIA sp. Myrtaceae.

No. 977. Wild plants growing near Kanchow, Kiangsi, December 14, 1926. *Kwa tsz cha.* A low compact shrub with dense foliage and black fruits the size of a pea or larger. It is apparently not particular as to soil and does well even on sterile slopes.

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designation appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

73065. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received June 13, 1927.

One of the best varieties in the Canal Zone.

73066. PSEDERA HENRYANA (Hemsl.) C. Schneid. Vitaceae.

From Coimbra, Portugal. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 29, 1927.

No. 1316. April 8, 1927. An ornamental subtropical vine with variegated foliage, which clings to stone walls by means of round flat pads.

73067 to 73072.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March and April, 1927.

73067. JASMINUM DICHOTOMUM Vahl. Oleaceae. **Jasmine.**

No. 1241. Near Aburi, Gold Coast, February 26, 1927. A climbing tropical shrub with deep-green leaves in pairs and fragrant white flowers..

73068. PTERYGOTA KAMERUNENSIS Schum. and Engl. Sterculiaceae.

No. 1162. Botanic garden, Victoria, Cameroon, February 10, 1927. A handsome tropical African tree with large scarlet fruits the size of an orange, but irregular in shape.

73069. RITCHIEA REFLEXA (Schum. and Thonn.) Gilg and Benedict. Capparidaceae.

No. 1227. Between Akkra and Aburi, Gold Coast, February 26, 1927. An ornamental tropical shrub with large greenish fragrant flowers in umbels and large elongated podlike fruits.

73070. STERCULIA sp. Sterculiaceae.

No. 1212. Near village of Doblo, between Akkra and Winneba, Gold Coast, February 27, 1927. A large handsome tropical tree with large deep-green leaves and pods the size of apples.

73071. SYNSEPALUM DULCIFICUM (Schum.) Daniell. Sapotaceae.

No. 1173. Botanic garden, Victoria, Cameroon, February 10, 1927. *Miraculous fruit.* An ornamental tropical African shrub about 6 feet high, with dark-red fruits which, when eaten, make sour things taste sweet.

73072. MALACANTHA WARNECKEANA Engler. Sapotaceae.

No. 1244. Between Akkra and Aburi, Gold Coast. An attractive tropical shrub with a profusion of red berries similar to coffee berries. These berries contain a single large seed surrounded by sweet yellow pulp, which is very refreshing.

73073. ELYMUS DELILEANUS Schult. Poaceae. **Grass.**

From Giza, Egypt. Seeds presented by Mah Abaza, director, horticultural section, Ministry of Agriculture. Received June 13, 1927.

An annual tufted grass up to a foot high, with narrow, rigid leaves. Native to Asia Minor and Egypt.

73074. LOLIUM PERENNE L. Poaceae. **Perennial ryegrass.**

From Ayr, Scotland. Seeds presented by McGill & Smith, at the request of R. G. Stapledon, director, Welsh Plant-Breeding Station, Aberystwyth, Wales, through H. N. Vinall, Bureau of Plant Industry. Received June 13, 1927.

Scotch-grown seeds.

73075. LARIX sp. Pinaceae. **Larch.**

From Dunkeld, Perth, Scotland. Seeds presented by B. R. Hoffman, Philadelphia, Pa. Received June 15, 1927.

A hybrid larch, a cross between a Japanese and a Scotch larch, said to be faster growing than either parent.

73076. STERCULIA FOETIDA L. Sterculiaceae. **Hazel bottle tree.**

From Mayaguez, Porto Rico. Seeds presented by T. B. McClelland, horticulturist, agricultural experiment station. Received June 15, 1927.

A tall handsome tropical tree with large compound leaves and spreading panicles of dull-red flowers. Native to tropical Asia.

73077 and 73078. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, director, Estación Nacional Agronómica y Colegio de Agricultura. Received June 15, 1927.

Locally developed varieties.

73077. From Monte Criste.

73078. From Samana.

73079. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

From Jalisco, Mexico. Seeds obtained through L. H. Dewey, Bureau of Plant Industry. Received April 26, 1927.

This close relative of the kapok tree (*Ceiba pentandra*) is described by P. C. Standley (Contributions from the United States National Herbarium, vol. 23, pt. 3) as a large or medium-sized tree with a greenish spiny trunk, compound leaves, and hard, oblong fruits about 7 inches long which contain whitish down used for stuffing pillows, mattresses, life preservers, insulation, and for making candlewicks. It is native to western and southern Mexico.

For previous introduction see No. 66168.

73080. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

From Algiers, Algeria. Seeds presented by Dr. L. Trabut, Government botanist, through W. T. Swingle, Bureau of Plant Industy. Received June 18, 1927.

73081. CASIMIROA EDULIS Llave. Rutaceae. **White sapote.**

From Chico, Calif. Plants from the United States Plant Introduction Garden. Received June 21, 1927.

Plants grown from scions originally received from O. E. Orpet, Santa Barbara, Calif. The fruits are up to 3½ inches in diameter and are of excellent quality.

73082 to 73085. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Mandalay, Burma, India. Seeds presented by M. McGibbon, economic botanist, Department of Agriculture. Received June 21, 1927.

Locally developed varieties.

73082. A. Cultivators' mixed varieties.

73083. B. Selection C/10.

73084. C. Selection C/19.

73085. D. Mixed prolific varieties.

73086. APIUM PROSTRATUM Labill. Apiaceae.

From Wellington, New Zealand. Seeds presented by A. H. Cockayne, director, fields division, Department of Agriculture. Received June 20, 1927.

A white-flowered herbaceous New Zealand plant of prostrate habit, which is closely related to common celery (*Apium graveolens*).

73087 and 73088.

From Algeria, North Africa. Plants presented through W. T. Swingle, Bureau of Plant Industry. Received June 17, 1927.

73087. EUPHORBIA LARO Drake. Euphorbiaceae.

From the botanic garden, Algiers. A drought-resistant tree 8 feet high, which may be of value as stock for *Euphorbia intisy*, a rubber-yielding tree.

73088. OLEA EUROPAEA L. Oleaceae. **Olive.**

From Biskra. An Algerian variety of large size and good quality.

73089. BOMBAX FLAMMEUM Ulbrich. Bombacaceae.

From South Bank Province, Gambia, West Africa. Seeds presented by Maj. L. A. W. Brooks, traveling commissioner. Received June 16, 1927.

A tropical West African tree, probably of ornamental value.

73090 to 73093. LEPTOSPERMUM spp. Myrtaceae.

From New Plymouth, New Zealand. Seeds purchased from Duncan & Davies. Received June 16, 1927.

73090. LEPTOSPERMUM SCOPARIUM Forst. **Manuka.**

An evergreen shrub which is one of the most abundant in New Zealand. It is of compact, bushy habit, sometimes 30 feet high. The hard, leathery, sharp-pointed leaves are very aromatic, for which reason they have sometimes been used for making tea. The flowers, borne in great profusion, are white or pink, and about three-fourths of an inch across.

For previous introduction see No. 61060.

73091. LEPTOSPERMUM SCOPARIUM Forst.

Variety *roseum*. An ornamental evergreen shrub 10 feet high, with numerous pink flowers. Native to New Zealand.

73092. LEPTOSPERMUM SCOPARIUM NICHOLLI (Darr.-Smith) Turrill.

A red-flowering variety of this very abundant tree or shrub, the beautiful colonial counterpart of the English broom or gorse, sometimes 30 feet high. Early voyagers and colonists sometimes used its pungent leaves in place of tea. Indeed, the whole plant, including leaves, flowers, fruit, and young shoots, is highly aromatic, and the oil which it contains will perhaps

73090 to 73093—Continued.

in the future be put to some useful purpose. The wood is largely used for fences and firewood. The Maoris made use of it for their paddles and spears, and a bunch of the twigs makes an excellent broom.

For previous introduction see No. 53928.

73093. LEPTOSPERMUM sp.

An evergreen ornamental shrub with numerous white or pink flowers. Native to New Zealand.

73094. COMBRETUM sp. Combretaceae.

From Cape St. Mary, Gambia, West Africa. Seeds presented by Archibald J. Brooks, Director, Department of Agriculture. Received June 22, 1927.

A tropical woody ornamental with flowers produced in spikes.

73095 to 73099.

From Ceylon. Seeds presented by A. A. Ward, American Ceylon Mission, Tellippalai. Received June 18, 1927.

Seeds from trees growing in the Jaffna Peninsula, northern Ceylon, at 9 to 20 feet altitude. The soil is a stiff red clay and contains a small amount of sand. Coral rock underlies the whole region at depths varying from 10 inches to 15 feet.

73095. AZADIRACHTA INDICA (L.) Juss. Meliaceae.

Vempu, vermpoo. A large handsome tropical Indian tree, with long spreading branches and small fragrant white flowers. The timber is hard and is not eaten by termites. The tree is suited to the seacoast as well as to the interior. The leaves and fruits are used medicinally, and the seeds contain an oil which is used for rheumatism.

For previous introduction see No. 46573.

73096 and 73097. CAESALPINIA PULCHERRIMA (L.) Swartz. Caesalpiniaceae. **Flower fence.**

Peacock flower. A handsome tropical evergreen shrub, about 7 feet high, which in Ceylon withstands a drought of two or three months. It has mimosalike foliage and showy flowers which appear on the new growth.

73096. A yellow-flowered variety.

73097. A red-flowered variety.

73098. CHALCAS KOENIGII (L.) Kurz. Rutaceae.

Karu vempu, catu vermpoo. A small tropical tree found chiefly in the dry region. The seeds are in season generally during April. It prefers light rich soil and with cultivation will thrive at an altitude of 2,000 feet. In Ceylon the dried leaves are used in curries, soups, etc. This variety is propagated by seeds.

73099. MADHUCA LONGIFOLIA (L.) Coville (*Bassia longifolia* L.). Sapotaceae.

Illupai, il loop pay. A medium-sized tree of attractive habit and thick foliage, which thrives in the dry districts of northern Ceylon. The flowers have a pungent odor and are dried and eaten, and in India alcohol is obtained from them. The seeds yield an edible oil used in cooking both by the Europeans and the natives of Ceylon. It could probably be refined so as to compete with olive oil. The oil cake makes good fertilizer, and it may prove useful in making soap. The timber is hard and heavy and useful for wall plates, doors, and window frames.

73100 and 73101.

From Amoy, China. Seeds presented by H. H. Chung, University of Amoy. Received May 3, 1927.

73100 and 73101—Continued.

73100. ARDISIA CRISPA (Thunb.) A. DC. (*A. crenata* Sims). Myrsinaceae.

A small ornamental tropical shrub, about 7 feet high, with narrow green leaves and red fruits. Native to southeastern Asia.

For previous introduction see No. 67758.

73101. GLYPTOSTROBUS PENSILIS (Staunton) Koch. Pinaceae.

A handsome coniferous subtropical tree from southeastern China. The timber is very durable.

73102 to 73109. CITRUS spp. Rutaceae.

From Soledad, Cienfuegos, Cuba. Cuttings presented by Robert M. Grey, superintendent, Harvard Botanic Garden. Received May 9, 1927.

73102. CITRUS LIMONIA × AURANTIFOLIA.

Lemon × native lime. A very productive variety with thin skin; it is intermediate between the parents in size and flavor. (*Grey.*)

73103 and 73104. CITRUS NOBILIS DELICIOSA × SINENSIS.

73103. No. 1. *Tangerine × orange.*

73104. No. 2. *Tangerine × orange.*

73105 and 73106. CITRUS SINENSIS (L.) Osbeck. **Sweet orange.**

73105. *Orange seedling.*

73106. *Valencia sport.*

73107 and 73108. CITRUS SINENSIS × NOBILIS DELICIOSA.

73107. No. 1. *Orange × tangerine.*

73108. No. 2. *Orange × tangerine.*

73109. CITRUS sp.

Hybrid Harvard No. 1.

73110 to 73122.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April, 1927.

73110. AMOMUM GRANUM-PARADISI L. Zingiberaceae.

A gingerlike tender plant 4 feet high, with stems red at the base, narrow leaves up to 8 inches long, and yellow flowers. At one time it was a well-known condiment, but is now used in veterinary medicine only. It is used by the natives of the Cameroon region as a drug.

73111. AMOMUM MELEGUETA Roscoe. Zingiberaceae.

Aburi, Gold Coast. A gingerlike bushy perennial, 5 feet high, with small golden seeds which are used as spice.

For previous introduction see No. 72992.

73112. PHIALODISCUS UNIJUGATUS Radlk. Sapindaceae.

No. 1225. February 27, 1927. *Etu dua.* A handsome shade tree with dense dark-green foliage and salmon-pink fruits which open and expose black seeds.

73113. APODYTES BENINENSIS Hook. f. Icacinaceae.

No. 1266. French Guinea, March 10, 1927. A small tropical tree, 3 to 5 meters high, found on very dry rocky land near Mamou. It produces attractive red berries which are bitter and not edible.

73110 to 73122—Continued.

73114. BOMBAX BUONOPOZENSE Beauv. Bombacaceae.

No. 1261. Near Mamou, French Guinea, March 10, 1927. A small tropical tree 8 to 10 meters high, with a spiny trunk. The large deep-red flowers, which appear before the leaves, are said to be darker on the young trees than on the old trees.

73115. DACTYLOCTENIUM AEGYPTIUM (L.) Richter (*Eleusine aegyptiaca* Desf.) Poaceae. **Grass.**

No. 1235. Collected near the village of Mibye, near Winneba, Gold Coast, February 27, 1927. A tropical prostrate annual grass which forms mats by rooting at the nodes.

For previous introduction see No. 51496.

73116. ERAGROSTIS CILIARIS (L.) Link. Poaceae. **Grass.**

No. 1224. Collected near the village of Mibye, near Winneba, Gold Coast, February 27, 1927. A tropical annual grass which grows in sandy places.

For previous introduction see No. 38010.

73117. EUGENIA CORONATA Schum. and Thonn. Myrtaceae.

No. 1216. March 1, 1927. A tropical evergreen shrub or tree with white flowers and dark-red berries, found near the seacoast within reach of the salt spray, near Elmina Castle, Gold Coast.

73118. FICUS PLATYPHYLLA Delile. Moraceae.

No. 1218. Cape Coast, Gold Coast, March 1, 1927. A handsome shade tree which grows to 80 feet in height and 24 feet in circumference, with dark-green stiff leathery leaves, about 10 inches in length, arranged in picturesque groupings on the branches. This tree is said to be the source of Kano rubber. The latex is used as bird lime, and tannin is obtained from the bark. A fabric is made from the bast by some of the natives of central Africa.

73119. INDIGOFERA MACROPHYLLA Schum. and Thonn. Fabaceae.

No. 1243. Between Akkra and Aburi, Gold Coast, February 26, 1927. A tall bushy tropical leguminous plant producing a large quantity of seed, found in stiff clay soil in the lowlands.

73120. MOMORDICA FOETIDA Schum. and Thonn. Cucurbitaceae.

No. 1171. Near Bouea, Cameroon, February 11, 1927. A tropical ornamental cucurbitaceous vine with egg-shaped orange fruits which are covered with soft spines and which split open to expel the seeds.

73121. MUSANGA SMITHII R. Br. Moraceae.

No. 1213. Near the Ekona estate, Cameroon, March 18, 1927. The corkwood tree of West Africa, which owes its name to the lightness of its white wood. It is 60 to 80 feet high and is a rapid grower. The leaves are palmate with drooping leaflets.

73122. PENNISETUM CILIARE (L.) Link (*P. cenchroides* Rich.). Poaceae. **Grass.**

No. 1294. Near Cape Manuel Lighthouse, Dakar, Senegal, March 16, 1927. A tropical grass 8 to 18 inches high, which grows in bunches 6 to 8 inches in diameter on sandy and rocky soil.

For previous introduction see No. 51648.

73123 and 73124.

From Soledad, Cienfuegos, Cuba. Seeds presented by Robert M. Grey, superintendent, Harvard Botanic Station. Received May, 1927.

73123 and 73124—Continued.

73123. ACACIA SCORPIOIDES (L.) W. F. Wight (*A. arabica* Willd.). Mimosaceae.

According to J. H. Holland (Useful Plants of Nigeria, pt. II, p. 288), a large proportion of the gum arabic of commerce is furnished by this tree, which is native to northern Africa and southwestern Asia. True gum arabic, however, is said to come only from another species, *Acacia senegal*. The pods and bark of *A. scorpioides* are used for tanning, and the leaves and young pods are sometimes fed to cattle. The wood is hard and durable and is used in India for making tools.

For previous introduction see No. 64663.

73124. OCHROMA LAGOPUS Swartz. Bombacaceae. **Balsa wood.**

A West Indian tree up to 18 meters high, with large yellowish white flowers. The extremely light wood is used for refrigeration purposes, insulation, and life preservers.

For previous introduction see No. 54332.

73125 to 73137. GOSSYPIUM spp. Malvaceae. Cotton.

From Kulikoro, Sudan, French West Africa. Seeds presented by R. H. Forbes, Compagnie Générale des Colonies. Received April 13, 1927.

73125. GOSSYPIUM ARBOREUM L.

Variety *Sanguineum*. Originally from Dahomey.

For previous introduction see No. 66870.

73126. GOSSYPIUM HERBACEUM L.

Korean silk.

73127 to 73129. GOSSYPIUM HIRSUTUM L.

73127. *Cambodia.* Originally from India.

73128. *Hardwick 20.*

73129. *Over the top.*

73130. GOSSYPIUM NANKING Meyen.

Karagani. Originally from India.

73131. GOSSYPIUM OBTUSIFOLIUM Roxb.

Originally from northern Nigeria.

For previous introduction see No. 67524.

73132. GOSSYPIUM PERUVIANUM Cav.

Originally from Dahomey.

For previous introduction see No. 65125.

73133 and 73134. GOSSYPIUM PUNCTATUM Schum. and Thonn.

73133. *Koroniba, Eikasso.*

73134. *Soudan Francais.*

73135. GOSSYPIUM sp.

Garrabe hills. Originally from India.

73136. GOSSYPIUM sp.

A kidney cotton.

73137. GOSSYPIUM sp.

Sea Island cotton originally from Dahomey.

73138. HERMODACTYLUS TUBEROSUS (L.) Mill. Iridaceae.

From Philadelphia, Pa. Tubers presented by Mrs. J. Norman Henry. Received May 16, 1927.

A hardy irislike plant a foot or more high with leaves 1 to 2 feet long and dark-purple and green flowers. Native to southern Europe.

73139. VIGNA CYLINDRICA (Stickm.) Skeels. Fabaceae. Catjang.

From Giza, Egypt. Seeds presented by Mah Abaza, director, horticultural section. Received May 13, 1927.

Lubia. A locally grown variety.

73140 to 73155.

From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. Received April 21, 1927.

73140. ABIES SPECTABILIS Lambert (*A. webbiana* Lindl.). Pinaceae. **Himalayan fir.**

An Asiatic fir which, as described by W. J. Bean (Trees and Shrubs Hardy in the British Isles, vol. 1, p. 128), is a tree sometimes 150 feet high in its native home in the Himalayas. The dark-green leaves are arranged in two opposite series so as to leave a V-shaped opening along the top; the individual leaves are 1 to 2 inches long. The cones, about 5 inches long, are violet-purple at first, becoming brown.

For previous introduction see No. 65751.

73141. ACER PECTINATUM Wall. Aceraceae. **Maple.**

A small subtropical maple, with 5-lobed, heart-shaped leaves about 4 inches long. Native to Sikkim, India, at altitudes of 8,000 to 12,000 feet.

For previous introduction see No. 56455.

73142. ACONITUM LURIDUM Hook. f. and Thoms. Ranunculaceae.

A subtropical herbaceous ornamental perennial, 2 to 3 feet high, with dull-red flowers.

For previous introduction see No. 38994.

73143. AINSLIAEA PTEROPODA DC. Asteraceae.

An erect herbaceous perennial, native to the temperate Himalayas, with hairy oval or heart-shaped leaves and small heads of white flowers.

73144. ANAPHALIS CONTORTA (Don) Hook. f. Asteraceae.

A bushy subtropical perennial up to 2 feet high, with narrow-oblong leaves and white or yellowish flowers. Native to the temperate Himalayas.

73145. ASTER SIKKIMENSIS Hook. f. and Thoms. Asteraceae.

An erect subtropical perennial, about 3 feet high, with numerous blue flower heads. Native to Sikkim, India.

73146. ASTER TRICEPHALUS C. B. Clarke. Asteraceae.

A small vigorous subtropical herbaceous perennial, with reddish flower heads. Native to Sikkim, India.

73147. ASTILBE RIVULARIS Buch.-Ham. Saxifragaceae.

A subtropical herbaceous perennial with creeping rhizomes and yellowish white flowers borne on stems 5 feet high.

For previous introduction see No. 50362.

73148. BERBERIS NAPAULENSIS (DC.) Spreng. Berberidaceae. **Barberry.**

A fine ornamental shrub, which grows to a good size, with stiff, bright-green, thorny leaves, yellow flowers, and maroon-colored berries. Native to eastern Asia.

For previous introduction see No. 67676.

73140 to 73155—Continued.

73149. BETULA UTILIS D. Don (*B. bhojpattra* Wall.). Betulaceae. **Birch.**

A tree 40 to 60 feet high, with reddish brown trunk and branches and bark which peels off in papery flakes. It is native to subtropical regions of the Himalayas. The oval coarsely toothed sharp-pointed leaves are 3 inches long, dark green above and paler beneath. In winter the orange-chocolate color of the twigs is very striking.

For previous introduction see No. 56400.

73150. CLEMATIS MONTANA Buch.-Ham. Ranunculaceae.

A vigorous ornamental climber, 30 feet or more high, with pure-white solitary flowers about 2 inches across. It is native to the Himalayas.

For previous introduction see No. 50337.

73151. CORYLUS FEROX Wall. Betulaceae. **Hazel.**

A wild hazel from Sikkim, India, whose small nuts, closely resembling the common hazelnut in taste, are much prized by the natives. The tree, 20 feet high, grows at altitudes of 8,000 to 10,000 feet. The wood is pinkish white, even grained, and moderately hard.

For previous introduction see No. 58488.

73152. DICHROA FEBRIFUGA Lour. Hydrangeaceae.

A tall shrub, abundant in the temperate Himalayas from 5,000 to 8,000 feet. It has narrow leaves 3 to 8 inches long, terminal panicles of blue or purplish flowers, and berries of an intense blue.

For previous introduction see No. 47675.

73153. PITTOSPORUM FLORIBUNDUM Wight and Arnott. Pittosporaceae.

A handsome subtropical tree, with a short straight trunk and spreading branches and numerous yellowish flowers in terminal panicles. The tree has light-colored, strong, tough wood and yields an aromatic yellow resin or oleoresin having very adhesive properties. It is a native of the outer Himalayas, ascending to 3,500 feet.

For previous introduction see No. 57273.

73154. SAUSSUREA DELTOIDEA (DC.) C. B. Clarke. Asteraceae.

A tall herbaceous perennial, 4 to 8 feet in height, with large leaves having cottony lower surfaces. The extremely variable flower heads are often tipped with purple, and the corollas are white. It is native to the central and eastern Himalayas, growing at altitudes of 6,000 to 11,500 feet.

For previous introduction see No. 47786.

73155. VIBURNUM CORDIFOLIUM Wall. Caprifoliaceae.

A large subtropical shrub with heart-shaped sharply toothed leaves and small dense corymbs of white flowers. Native to the temperate Himalayas.

73156 to 73164.

From Magyarovar, Hungary. Seeds presented by John Suranyi, Agricultural Experiment Station for Plant Industry. Received May 5, 1927.

73158. LOLIUM PERENNE L. Poaceae. **Perennial ryegrass.**

Variety *hungaricum.*

73157. PHLEUM PRATENSE L. Poaceae. **Timothy.**

H.

73156 to 73164—Continued.

73158 to 73161. PISUM SATIVUM L. Fabaceae. **Pea.**

73158. *Mg.* 73160. *Fg.*

73159. *No. 1. Mo.* 73161. *No. 2. Mo.*

73162 and 73163. POA PRATENSIS L. Poaceae. **Bluegrass.**

73162. Variety *latifolia.*

73163. Variety *angustifolia.*

73164. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

Variety *pilosum.*

73165. RUBUS sp. Rosaceae. Blackberry.

From Lovedale, Cape Province, South Africa. Seeds presented by D. A. Hunter. Received April 13, 1927.

A large blackberry from the cool damp region about 20 miles south of Lovedale, on the Hogsback Mountains. (*Hunter.*)

73166 to 73170. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Leningrad, Russia. Seeds presented by A. Kol, chief, bureau of introduction, Institute of Applied Botany. Received May 14, 1927.

Locally grown seeds.

73166. No. 2. *Aran.* Collected at Kabul, Afghanistan, by Prof. N. Vavilov during his expedition in 1925.

73167. No. 6. Originally from the Agricultural Department, Nairobi, Kenya Colony, East Africa.

73168. No. 12. *Arhar No. 1.* From India.

73169. No. 16. From Colon, Panama. Collected by S. M. Bukassov during his expedition in 1926.

73170. No. 19. Obtained in 1925 in the market, city of Guatemala.

73171. PHASEOLUS RADIATUS L. Fabaceae.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, director, botanic gardens. Received May 13, 1927.

Locally grown seeds.

73172 to 73175.

From Sumatra and Taiwan. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received May 5, 1927.

73172. ELEUSINE CORACANA Gaertn. Poaceae. **Ragi.**

No. 6281. Plants grown with millet by the Tsuo aborigines at Namakaban, on Mount Morrison, Taiwan, at an altitude of 2,700 feet.

73173. QUERCUS sp. Fagaceae. **Oak.**

No. 6732. A large tropical oak tree growing at Pargambiran, Asahan, Sumatra.

73174. SALAKKA sp. Phoenicaceae. **Palm.**

No. 6815. Silo Maradja, Asahan, Sumatra. A very beautiful little palm growing in wet places. The fruits are used for acid by the natives, and the leaves make durable palm-leaf thatches.

73175. GOSSYPIUM sp. Malvaceae. **Cotton.**

No. 6380. *Kapas koelenbang.* This species is cultivated by the natives at Silo Maradja, Asahan, Sumatra. It is a curious shrub with greatly elongated fruits and seeds adhering in masses, from which all the fiber may be pulled off without separating the seeds.

73176. GOSSYPIUM sp. Malvaceae. **Cotton.**

From French Guinea, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May 16, 1927.

No. 1268. Dalaba. March 10, 1927. A tall-growing cotton used in making a coarse fabric. This cotton is cultivated and used by the Fullas, a very ancient race.

73177. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From the island of Guam. Seeds presented by C. W. Edwards, director, Guam Agricultural Experiment Station. Received May 16, 1927.

Locally grown small-seeded pigeon peas of the so-called Guam variety.

73178 to 73204.

From Moscow, Russia. Seeds presented by the secretary, Institute of Applied Botany and New Cultures. Received April, 1927.

73178. ALLIUM JESDIANUM Boiss. and Buhse. Liliaceae.

A pink-flowered onion, about 2 feet high, with flat linear leaves and a many-flowered umbel. Native to the Caucasus Mountains.

73179. ALTHAEA ROSEA (L.) Cav. Malvaceae. **Hollyhock.**

Black mallow. A local variety of the common hollyhock from western Russia.

73180. APOCYNUM VENETUM L. Apocynaceae.

A hardy herbaceous perennial, 2 feet high, with white flowers. The roots are used in medicine as a purgative and emetic.

73181 to 73184. ASTRAGALUS spp. Fabaceae.

73181. ASTRAGALUS CANDIDUS M. Pop.

A hardy leguminous perennial.

73182. ASTRAGALUS FILICAULIS Fisch. and Mey.

An erect annual leguminous plant, 3 to 10 inches high, native to Asia Minor and Turkestan.

73183. ASTRAGALUS RETAMOCARPUS Boiss. and Hohen.

A hardy herbaceous perennial about 2 feet high, native to Asia Minor.

73184. ASTRAGALUS sp.

A hardy leguminous plant.

73185. CALLIGONUM ARBORESCENS Litv. Polygonaceae.

A drought-resistant shrub 10 feet high, said to be a good sand binder. It is found in the region of the Caspian Sea.

73186. CAMPANULA sp. Campanulaceae. **Bellflower.**

A hardy herbaceous perennial with large blue flowers.

73187. DELPHINIUM FLEXUOSUM Bieb. Ranunculaceae.

A hardy herbaceous perennial with violet flowers. Native to the mountains of Armenia.

73188 to 73190. EREMURUS spp. Liliaceae.

73188. EREMURUS LACTIFLORUS O. Fedtsch.

A hardy herbaceous perennial with light-yellow flowers.

73178 to 73204—Continued.

73189. EREMURUS OLGAE Regel.

A hardy herbaceous perennial with white flowers produced in a dense raceme. Native to Turkestan.

73190. EREMURUS ROBUSTUS Regel. **Giant desert candle.**

A tall hardy herbaceous perennial with pink flowers on a stalk 5 to 8 feet high. Native to Turkestan.

73191. EXOCHORDA KOROLKOWI Lavall. Rosaceae. **Turkestan pearlbush.**

A hardy ornamental shrub with large masses of white flowers. Native to the mountains of Turkestan.

73192. FERULA ASSAFOETIDA L. Apiaceae.

A large herbaceous perennial, 6 to 12 feet high, with yellow flowers. The plant, which has a bad odor, is one source of asafetida.

73193. MISCANTHUS SACCHARIFLORUS (Maxim.) Hack. Poaceae. **Grass.**

A tall perennial Chinese grass with large feathery fan-shaped panicles; related to sugar cane.

For previous introduction see No. 66395.

73194. ONOBRYCHIS PULCHELLA Schrenk. Fabaceae.

A hardy herbaceous perennial native to western Russia.

73195. PAEONIA ALBIFLORA Pall. Ranunculaceae. **Chinese peony.**

A hardy herbaceous ornamental perennial about 2 feet high, with white flowers. Native to Siberia.

73196 to 73200. PAPAVER SOMNIFERUM L. Papaveraceae. **Poppy.**

Decorative Mongolian varieties.

73196. A double red and black variety.

73197. A double pink variety.

73198. A double lilac-flowered variety.

73199. A single white variety with a pink edge.

73200. A double red and black variety.

73201. SILENE COMPACTA Fisch. Silenaceae.

A hardy herbaceous perennial with deep rose-colored flowers, found on dry slopes in Armenia.

73202. SPINACIA TETRANDRA Stev. Chenopodiaceae.

A wild spinach which grows in heavy soil from central Asia to Turkestan.

73203. VICIA SATIVA L. Fabaceae. **Common vetch.**

Seeds grown in western Russia.

73204. ZIZIPHORA CLINOPODIOIDES Lam. Menthaceae.

An ornamental perennial evergreen with pink flowers. Native to Siberia.

73205 to 73221. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

From Mandalay, Burma, India. Seeds presented by M. McGibbon, economic botanist. Received May 20, 1927.

73205 to 73221—Continued.

73205. No. 1. *Pe ngapi P. N. 1.* From Mandalay.

73206. No. 2. *Behrum 17010.* From the Chin Hills.

73207. No. 3. *Pe ngapi.* From Falam, Chin Hills.

73208. No. 4. *Pe ngapi.* From Sinlungaba, Bhamo district.

73209. No. 5. *Pe bôk.* From Bhamo.

73210. No. 6. *Pe ngapi.* From Kanpetlet, Pakokku Hill Tracts.

73211. No. 7. *Myet mai pe bôk.* From Yawnghwe, Southern Shan States.

73212. No. 8. *Pe bôk* (large variety). From Yawnghwe, Southern Shan States.

73213. No. 9. *Kyet tin nge pe bôk.* From Yawnghwe, Southern Shan States.

73214. No. 10. *Pe hto nin.* From Yawnghwe, Southern Shan States.

73215. No. 11. *Pe bôk.* From Hsipaw, Northern Shan States.

73216. No. 12. *Pe bôk.* From Mongtat, Namtu, Northern Shan States.

73217. No. 13. *Pe bôk.* From Lashio, Northern Shan States.

73218. No. 14. *Field pe bôk.* From Hsipaw, Northern Shan States.

73219. No. 15. *Taung ya pe bôk.* From Ksipaw, Northern Shan States.

73220. No. 16. *Pe ngapi.* From Akyab.

73221. No. 17. Green *pe bôk.* From Lashio, Northern Shan States.

73222. MELOCANNA HUMILIS Kurz. Poaceae. Bamboo.

From Sumatra. Plants collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May 20, 1927. Numbered June, 1927.

No. 710. Sibolangit. March 26, 1926. A clump species of bamboo with thin-walled culms and internodes 30 inches long. The wood is of fair quality, and the stems are never more than 2½ inches in diameter. A single clump may produce 1,000 culms 10 meters long. It is from this species that the Battaks make their flutes. The Battak names are *boloeh* and *krapat*.

73223 to 73262.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, director, botanic gardens. Received May 4, 1927.

73223. ALBIZZIA LUCIDA (Roxb.) Benth. Mimosaceae.

A handsome spreading leguminous tree with attractive feathery leaves, native to the East Indies.

For previous introduction see No. 69144.

73224. AMOMUM LONGIPES Valet. Zingiberaceae.

A tropical gingerlike herb with a creeping rootstock and aromatic seeds. Native to the East Indies.

73225. AMOMUM TRUNCATUM Gagn. Zingiberaceae.

A tropical herbaceous gingerlike plant with a creeping rootstock and aromatic seeds.

73226 to 73229. BARRINGTONIA spp. Lecythidaceae.

73223 to 73262—Continued.

73226. BARRINGTONIA ASIATICA (L.) Kurz.

As described by Rock (The Ornamental Trees of Hawaii, p. 663) this is a large, handsome East Indian tree with thick leathery shining bright-green leaves and very conspicuous flowers with four white petals and numerous crimson-tipped stamens, resembling a brush. The fruit is quite large and is the shape of a 4-sided pyramid; it is smooth on the outside and contains one seed. The tree forms extensive forests along the shores of some of the Pacific islands. In the Molukkas an illuminating oil is extracted from the seeds, and the dry fruits are gathered by the natives and used as floats for their fish nets.

For previous introduction see No. 58459.

73227. BARRINGTONIA RACEMOSA (L.) Roxb.

An evergreen tropical ornamental tree, 30 feet high, with racemes of red flowers. Native to the East Indies.

73228. BARRINGTONIA SPICATA Blume.

A tropical ornamental shrub 5 feet or more high, with narrowly oblong leaves and rosy pink flowers in slender pendulous spikes a foot or more long. Native to Java.

73229. BARRINGTONIA SUMATRANA Miquel.

A large ornamental spreading East Indian shrub with leathery elliptic leaves and small whitish flowers in long pendulous spikes. Native to the Malay Peninsula.

73230. BELLUCIA AXINANTHERA Triana. Melastomaceae.

A small ornamental tropical American tree with large leaves, white flowers tinged with pink and yellow globose fruits about an inch in diameter. The white acidulous flesh is eaten by the natives of Venezuela.

73231. CARISSA SPINARUM L. Apocynaceae.

A spiny evergreen tropical ornamental tree, 20 feet high, with white axillary flowers. Native to the East Indies.

73232. CARYOTA GRIFFITHII Beccari. Phoenicaceae. Palm.

A medium-sized palm, 20 feet high, with pinnate leaves up to 9 feet long. Native to Burma.

73233. CARYOTA RUMPHIANA Mart. Phoenicaceae. Palm.

An East Indian palm about the size of the coconut, with graceful bipinnate leaves.

For previous introduction see No. 51710.

73234. CASUARINA RUMPHIANA Miquel. Casuarinaceae.

A tropical leafless tree with very slender pendent green branchlets. Native to Java.

For previous introduction see No. 67679.

73235. CHALCAS EXOTICA (L.) Millsp. Rutaceae.

A small ornamental white-flowered tree with pinnate dark-green leaves and roundish red fruits about half an inch long. Native to eastern Asia.

For previous introduction see No. 40392.

73236. CRACCA VOGELII (Hook. f.) Kuntze (*Tephrosia vogelii* Hook. f.). Fabaceae.

A shrubby legume from tropical Africa, the leaves of which are macerated and thrown into the water to kill fish.

For previous introduction see No. 66250.

73223 to 73262—Continued.

73237. CROTALARIA MYSORENSIS Roth. Fabaceae.

A much-branched tropical leguminous annual, 2 feet high, with yellow flowers. Native to eastern Asia.

For previous introduction see No. 72435.

73238. DAMMARA ALBA Rumph. (*Agathis loranthifolia* Salisb.). Pinaceae. **White dammar pine.**

A large Malayan coniferous tree, up to 100 feet, which is the source of the gum known commercially as dammar, which is used in the making of varnish.

For previous introduction see No. 51815.

73239. ELAEOCARPUS GRANDIFLORUS J. E. Smith. Elaeocarpaceae.

An ornamental evergreen shrub about 20 feet high, with white and crimson flowers. Native to Mauritius.

For previous introduction see No. 69153.

73240. ELAEOCARPUS TREUBII Hochr. Elaeocarpaceae.

A tropical Asiatic tree with clusters of small flowers. It may be of value as an ornamental.

73241. ELETTARIA ATROPURPUREA Teysm. and Binn. Zinziberaceae.

A herbaceous tropical plant, up to 4 meters high, leaves marked with red and greenish sour edible fruits.

73242. GARDENIA GJELLERUPII Valet. Rubiaceae.

A tropical East Indian shrub or small tree up to 5 meters high, with fragrant showy yellow flowers.

73243 and 73244. HONCKENYA FICIFOLIA Willd. Tiliaceae.

For previous introduction see No. 67572.

73243. A purple-flowered ornamental shrub, native to the East Indies.

73244. Variety *alba*. A white-flowered form.

73245. JATROPHA MULTIFIDA L. Euphorbiaceae.

An ornamental tropical tree, 5 to 15 feet high, with palmately divided leaves and scarlet flowers. Native to Java.

For previous introduction see No. 60398.

73246. JATROPHA PODAGRICA Hook. Euphorbiaceae.

A handsome Central American shrub 1 or 2 feet high, with peltate, 3-lobed to 5-lobed leaves 4 to 8 inches wide and orange flowers with scarlet petals.

For previous introduction see No. 69157.

73247. LIVISTONA COCHINCHINENSIS (Blume) Mart. Phoenicaceae. **Palm.**

A tall fan-leaved palm, 50 feet high, native to Malakka.

73248. MELIA CANDOLLEI Juss. Meliaceae.

A tropical ornamental tree with pinnate foliage and panicled flowers.

73249. PANDANUS FURCATUS Roxb. Pandanaceae. **Screw pine.**

An East Indian ornamental tree, up to 5 meters high, with dark-green linear spiny leaves.

For previous introduction see No. 51728.

73223 to 73262—Continued.

73250. PANGIUM EDULE Reinw. Flacourtiaceae.

A Philippine tree up to 25 meters high, with very large leaves, yellowish green flowers, and oval brown fruits, 6 inches long, with edible flesh. The seeds are poisonous when fresh, but are edible after steeping in water.

For previous introduction see No. 56067.

73251. PAYENA LEERII (Teysm. and Binn.) Kurz. Sapotaceae.

The gutta sundek tree of the Malay Peninsula; of possible value as a source of gutta-percha.

For previous introduction see No. 66233.

73252. PHAEOMERIA MAGNIFICA (Roscoe) Schum. (*P. imperialis* Lindl.). Zinziberaceae.

A tropical herbaceous perennial, up to 20 feet high, with leaves 1 to 2 feet long and numerous scarlet flowers. Native to Mauritius.

For previous introduction see No. 67585.

73253. PHASEOLUS CARACALLA L. Fabaceae. **Bertoni bean.**

Java-grown seeds.

For previous introduction see No. 61006.

73254. PITHECOLOBIUM CLYPEARIA (Jack) Benth. Mimosaceae.

A tropical ornamental low tree with finely cut foliage and small whitish flowers. Native to the East Indies.

73255. PITHECOLOBIUM HYMENEAEFOLIUM (Humb. and Bonpl.) Benth. Mimosaceae.

An ornamental leguminous tree with pinnate foliage, native to tropical America.

73256. PSIDIUM ARACA Raddi. Myrtaceae.

A tropical American shrub which bears small edible yellow fruits, said to contain few seeds.

For previous introduction see No. 38944.

73257. RHODOMYRTUS TOMENTOSA (Ait.) Wight. Myrtaceae. **Rose myrtle.**

A small handsome shrub with abundant pink flowers and small edible purplish fruits the size of gooseberries. Native to southeastern China.

For previous introduction see No. 65849.

73258. SACCIOLEPIS INTERRUPTA (Willd.) Stapf. Poaceae. **Grass.**

A tall stout tropical grass, 3 to 5 feet high, native to swampy places in the East Indies.

73259. SARACA DECLINATA (Jack) Miquel. Caesalpiniaceae.

A tropical ornamental pinnate-leaved tree with bright-yellow, red-tinged flowers, native to Java.

For previous introduction see No. 44900.

73260. SARACA INDICA L. Caesalpiniaceae.

An ornamental tropical tree with large heads of scarlet flowers, native to southern India.

For previous introduction see No. 66154.

73261. SESBANIA PAULENSIS Barb.-Rodr. Fabaceae.

A leguminous shrub described by Rodrigues (Plantes Novas Cultivadas Jardim Botanico do Rio de Janeiro, vol. 2, p. 13) as of erect habit, about 10 feet high, with narrow, angular branches, finely pinnate leaves, and handsome yellow flowers in few-flowered racemes.

For previous introduction see No. 65306.

73223 to 73262—Continued.

73262. TRICHOLAENA ROSEA Nees. Poaceae.

Java-grown seeds. **Natal grass.**

73263 to 73266.

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, superintendent, La Mortola. Received May 7, 1927.

73263 to 73265. CISTUS spp. Cistaceae. **Rockrose.**

73263. CISTUS CORBARIENSIS Pourr.

An ornamental shrub up to 5 feet high, with white flowers about an inch in diameter. Native to Spain.

73264. CISTUS FLORENTINUS Lam.

An ornamental shrub, 3 feet high, which is a hybrid between *Cistus monspeliensis* and *C. salvifolius*. It has very narrow leaves and white flowers.

For previous introduction see No. 67636.

73265. CISTUS PURPUREUS Lam.

A shrub, 4 feet or less in height, which is a hybrid between *Citus ladaniferus* and *C. villosus*. The narrowly oblong leaves are wrinkled above, and the lilac-purple flowers with yellow petal bases are 3 inches across and usually in threes.

For previous introduction see No. 67637.

73266. CLERODENDRUM sp. Verbenaceae.

A hardy ornamental shrub, native to western China.

73267. LOTUS ULIGINOSUS Schkuhr. Fabaceae.

From Auckland, New Zealand. Seeds presented by the New Zealand Loan & Mercantile Agency. Received May 7, 1927.

A herbaceous perennial pasture plant of considerable importance in New Zealand, where it grows in wet swampy ground.

For previous introduction see No. 62378.

73268 to 73270.

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, superintendent, La Mortola. Received May 7, 1927.

73268 and 73269. RAPHIOLEPIS INDICA (L.) Lindl. Malaceae.

For previous introduction see No. 63632.

73268. A low ornamental evergreen shrub, up to 5 feet high, with loose panicles of pink flowers about half an inch across and red fruits. Native to southern China.

73269. Variety *Phaeostemon*.

73270. SCHINUS DEPENDENS Ortega. Anacardiaceae.

An ornamental spiny shrub or small tree with pinnate fragrant foliage and dense racemes of small yellow flowers.

For previous introduction see No. 42878.

73271 to 73273.

From Bordeaux, Gironde, France. Seeds presented by Prof. L. Beille, director, botanic garden of Talence. Received May 9, 1927.

73271. CHENOPODIUM QUINOA Willd. Chenopodiaceae. **Quinoa.**

A South American herbaceous plant about 5 feet high, the seeds of which are used as food.

73271 to 73273—Continued.

73272. ELAEAGNUS PUNGENS REFLEXA (Morr. and Dec.) Rehder. Elaeagnaceae.

An ornamental spreading, hardy, somewhat spiny Japanese shrub up to 4 meters high, with oval-lanceolate leaves, fragrant silvery white flowers in small pendulous clusters followed by red fruits.

For previous introduction see No. 32941.

73273. PTEROCARYA FRAXINIFOLIA (Lam.) Spach (*P. caucasica* Meyer). Juglandaceae.

A handsome spreading tree 60 feet or less in height, with attractive dark-green, pinnate leaves about a foot long. It is native to the Caucasus and will probably not be hardy north of Massachusetts.

For previous introduction see No. 64208.

73274 to 73285.

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co. Received May 9, 1927.

73274. CLEMATIS VEITCHIANA Craib. Ranunculaceae.

A Chinese woody climber with papery leaves and long loose clusters of drooping yellowish white flowers.

For previous introduction see No. 53660.

73275. DIERVILLA CORAEENSIS (Thunb.) DC. Caprifoliaceae.

An ornamental Japanese shrub, 6 to 10 feet high, with oval long-pointed leaves 3 to 5 inches long and flowers which are at first pale pink, later changing to carmine.

For previous introduction see No. 43841.

73276. GENISTA FLORIDA L. Fabaceae.

An evergreen shrub about 6 feet high, with yellow flowers. It is native to Spain.

73277. HYPERICUM sp. Hypericaceae.

A yellow-flowered Chinese shrub which will probably prove hardy throughout most of the United States.

73278. ILEX AQUIFOLIUM L. Aquifoliaceae. **English holly.**

Variety *wilsonii*. A hardy ornamental tree, native to western China, with dark-green oval spiny leaves and ovoid red berries.

73279. LIGUSTRUM WALKERI Decaisne. Oleaceae. **Privet.**

An evergreen shrub native to southern India, with oval or lanceolate leaves and large panicles of white flowers.

For previous introduction see No. 67041.

73280. PHILADELPHUS sp. Hydrangeaceae.

An ornamental Chinese shrub which will probably prove hardy throughout most of the United States.

73281. SKIMMIA FOREMANNII Knight. Rutaceae.

A low, densely branched Japanese evergreen shrub with narrow yellowish green leaves and roundish red berries. It is considered to be a hybrid between *Skimmia japonica* and *S. fortunei*.

For previous introduction see No. 67375.

73282. SPIRAEA HENRYI Hemsl. Rosaceae. **Spirea.**

An ornamental hardy Chinese shrub up to 2 meters high, with loose clusters of white flowers.

73274 to 73285—Continued.

73283. STRANVAESIA DAVIDIANA UNDULATA (Decaisne) Rehd. and Wills. Malaceae.

A low spreading evergreen shrub, or occasionally a small tree, native to western China. The leathery oval leaves are glossy green, 1 to 3 inches long, and the white flowers, about half an inch across, appear in terminal clusters. Its greatest charm as an ornamental is the abundant crop of orange fruits.

For previous introduction see No. 66312.

73284. SYRINGA TOMENTELLA Bur. and Franch. Oleaceae. **Wilson lilac.**

A bushy shrub about 8 feet high, with elliptic leaves, hairy beneath, and white or lilac flowers in clusters 6 inches long. Native to western China.

For previous introduction see No. 67055.

73285. TROCHODENDRON ARALIOIDES Sieb. and Zucc. Trochodendraceae.

A hardy evergreen shrub 3 feet high with greenish flowers. Native to Japan.

73286 and 73287.

From El Salvador, Central America. Seeds presented by Dr. Salvador Calderon, through Paul C. Standley, United States National Museum. Received May 16, 1927.

73286. TABEBUIA PENTAPHYLLA (L.) Hemsl. Bignoniaceae.

A handsome tropical deciduous tree, about 35 feet high, native to Central America. During its flowering period, from January to March, the numerous large clusters of pink flowers make the tree very attractive.

For previous introduction see No. 55737.

73287. TRIPLARIS AMERICANA L. Polygonaceae.

A large tropical timber tree with curious, 3-angled woody fruits. Native to Central America.

73288. SACCHARUM OFFICINARUM L. Poaceae. Sugar cane.

From Muzaffarpur, Bengal, India. Cuttings obtained from Noel Deer, superintendent of factories, through E. W. Brandes, Bureau of Plant Industry. Received May 21, 1927.

A locally developed variety.

73289 to 73388.

From Gandja, Transcaucasia, Russia. Seeds presented by the Central Transcaucasian Agricultural Plant Breeding and Experiment Station. Received May 26, 1927.

73289 to 73304. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

Numbers 73289 to 73298 are local varieties.

73289. No. 630. A white variety from Azerbaijan.

73290. No. 634. A black variety from Azerbaijan.

Numbers 73291 to 73293 are from Armenia.

73291. No. 663.

73292. No. 666.

73293. No. 670.

Numbers 73294 to 73297 are from Azerbaijan.

73294. No. 671.

73295. No. 678.

73296. No. 681.

73297. No. 684.

73298. No. 685. From Armenia.

73299. No. 686. *Martar.* From Armenia.

Numbers 73300 to 73304 are local varieties.

73289 to 73388—Continued.

73300. No. 688. From Armenia.

73301. No. 692. From Armenia.

Numbers 73302 to 73304 are from Azerbaijan.

73302. No. 695.

73303. No. 701.

73304. No. 708. A mixed variety.

73305 to 73374. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

Numbers 73305 to 73309 are local varieties.

73305. No. 2005. From Derbent.

73306. No. 2107. From Derbent.

73307. No. 2902. From Azerbaijan.

73308. No. 2916. From Azerbaijan.

73309. No. 2500. From Ansheron.

73310. No. 2530. *Sari boogda.* From Azerbaijan.

Numbers 73311 to 73316 are from Azerbaijan Mass selection from local strains.

73311. No. 2627.

73312. No. 2628.

73313. No. 2629.

73314. No. 2631.

73315. No. 2632.

73316. No. 2633.

Numbers 73317 to 73325 are from Azerbaijan.

73317. No. 2639. *Shirvan.*

73318. No. 2650. *Kara glianikh.*

73319. No. 2691. Locally grown mixed seeds,

73320. No. 2692. *Sari boogda.*

73321. No. 2694. *Banatka.*

73322. No. 2695. *Kanarskaia.*

73323. No. 2698. *Sedouska* (gray bearded).

73324. No. 2894. *Muganka* × *belokoloska* (white bearded).

73325. No. 2897. *Krasnokoloska* (red bearded).

Numbers 73326 to 73331 are from Armenia.

73326. No. 2870. *Kolatka.*

73327. No. 2971. Mixed seeds.

73328. No. 2872. *Kamchatka.*

73329. No. 2873. *Karmir.*

73330. No. 2875. *Spitage.*

73331. No. 2882. *Amlaik.*

Numbers 73332 to 73334 are from Azerbaijan.

73332. No. 2893. *Muganka* × *belokoloska* (white bearded).

73333. No. 2895. *Belokoloska* (white bearded).

73334. No. 2896. A local variety.

73335. No. 2898. *Sari boogda.*

73336. No. 2900. *Kubanka.*

73337. No. 2901. *Muganka.*

73338. No. 2908. A local variety.

73339. No. 2910. A local variety.

73340. No. 2911. *Belaia besostaia* (white bearded).

Numbers 73341 to 73344 are local varieties.

73341. No. 2914.

73342. No. 2915.

73343. No. 2935.

73344. No. 2936.

Numbers 73345 to 73351 are from Armenia.

73345. No. 2963. *Spitakat.*

73289 to 73388—Continued.

73346. No. 2964. *Kamchatka.*

73347. No. 2965. *Gomalos.*

73348. No. 2970. *Belokoloska* (white bearded)

73349. No. 2975. Mixed seeds.

73350. No. 2978. *Kamrakhat.*

73351. No. 2981. *Sari boogda.*

Numbers 73352 to 73355 are local varieties from Azerbaijan.

73352. No. 2985. 73354. No. 2987.

73353. No. 2986. 73355. No. 2992.

73356. No. 2996. [No other data.]

Numbers 73357 to 73374 are from Azerbaijan.

73357. No. 2999. Mixed seeds.

73358. No. 3002. Mixed seeds.

73359. No. 3004. A local variety.

73360. No. 1640. *Kirda boogda.*

73361. No. 1644. *Kirda boogda.*

73362. No. 1650. *Khurgeno boogda.*

73363. No. 1661. *Drobnushka.*

73364. No. 1662. *Chernovka.*

73365. No. 1674. *Kara kilchik.*

73366. No. 1675. *Chernokoloska* (black heads).

73367. No. 1708. *Kizil boogda.*

73368. No. 1716. *Mavsar.*

73369. No. 1728. *Ag boogda.*

73370. No. 1752. *Mestnaia.* A local variety.

73371. No. 1755. *Mestnaia.* A local variety.

73372. No. 1879. *Kara shirvan.*

73373. No. 1987. *Shirvan.*

73374. No. 1988. *Kara kilchik.*

73375 to 73387. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

Numbers 73375 to 73377 are from Azerbaijan.

73375. No. 1642. *Sari boogda.*

73376. No. 2529. *Kara kilchik.*

73377. No. 2638. A selection from a local strain.

73378. No. 2512. A local variety from Ansheron.

Numbers 73379 to 73387 are from Azerbaijan.

73379. No. 2630. A selection from a local strain.

Numbers 73380 to 73385 are local varieties.

73380. No. 2912. 73383. No. 2958.

73381. No. 2913. 73384. No. 2960.

73382. No. 2956. 73385. No. 3000.

73386. No. 1863. *Besostka* (beardless).

73387. No. 1797. *Ag boogda.*

73388. TRITICUM SPELTA L. Poaceae. **Spelt.**

No. 2868. *Polba.* From Armenia.

73389. PHYLLOSTACHYS sp. Poaceae. **Bamboo.**

From Florida. Plants and rhizomes collected by K. A. Young, Bureau of Plant Industry. Numbered April, 1927.

A bamboo from a small grove of uncertain age growing on the Laughlin estate, Zellwood, Fla. The culms are up to 45 feet in height, 11 inches in circumference, and more elliptic in cross section than those of any other bamboo I have seen. The space between the nodes and what I am calling the "supranodal ring" is distinctly black. Otherwise this is much like *Phyllostachys bambusoides.* (*Young.*)

73390 to 73393.

From Auckland, New Zealand. Seeds presented by the New Zealand Loan & Mercantile Agency. Received May 7, 1927.

73390 and 73391. AGROSTIS CAPILLARIS L. Poaceae. **Rhode Island bent.**

Selections grown in New Zealand.

For previous introduction see No. 66625.

73390. A. 73391. B.

73392. FESTUCA RUBRA FALLAX (Thuill.) Hack. Poaceae. **Chewing's fescue.**

Grere. A perennial grass with loosely tufted culms, grown in New Zealand.

73393. LOTUS ANGUSTISSIMUS L. Fabaceae.

Variety *A–1.* An upright slender-stemmed leguminous annual about a foot high, with yellow flowers.

For previous introduction see No. 51856.

73394. JUGLANS sp. Juglandaceae. **Tocte.**

From Ecuador. Seeds presented by Dr. Francisco Banda, Legation of Ecuador, Washington, D. C. Received May 19, 1927.

A wild walnut which resembles closely the black walnut of the United States. The thick-shelled nut contains a kernel of mild pleasant flavor.

For previous introduction see No. 63588.

73395. TERAMNUS UNCINATUS (L.) Swartz. Fabaceae.

From Sao Paulo, Brazil. Seeds presented by Amadeu A. Barbiellini. Received May 20, 1927.

A slender tropical American leguminous vine, used as forage in Brazil and the Virgin Islands.

For previous introduction see No. 67889.

73396 to 73398. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Aleppo, Syria. Seeds obtained through Harry L. Troutman, American consul. Received May 31, 1927.

Varieties grown in the vicinity of Aleppo.

73396. *Aintab.* 73398. *Ashoori.*

73397. *Alemi.*

73399. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received June 1, 1927.

No. 1245. From the market at Secundee, Gold Coast, March 1, 1927. An African form of the Palmyra palm of India, which resembles the cabbage palm of Florida. It stands drought well and is a slow grower, though palms have attained a height of 7 feet in three years. The edible fruits taste a little like a mango, but they are very fibrous. In the number of uses to which this palm is put it rivals the coconut palm. A delicate sugar is made from the sap, which flows in abundance from its inflorescence when cut. The seeds are germinated, and the young subterranean hypocotyl is used as a vegetable.

For previous introduction see No. 66649.

73400. PRUNUS sp. Amygdalaceae. Plum.

From Lemberg, Moselle, France. Plants and scions presented by Paul Wack, Newark, N. J. Received April 7, 1927.

A French-grown plum with small yellow fruits. The tree is about 6 feet high, unarmed, with the upper branches pendulous.

73401 to 73450.

From Elstree, Herts, England. Plants presented by Hon. Vicary Gibbs, Aldenham House Gardens. Received April 8, 1927.

73401. ABELIA SERRATA Sieb. and Zucc. Caprifoliaceae.

An ornamental Japanese shrub with small pink flowers.

73402. ABELIA TRIFLORA R. Br. Caprifoliaceae.

An ornamental Himalayan shrub up to 15 feet high. It is of upright habit with rosy white flowers.

For previous introduction see No. 37478.

73403. ALNUS HIRSUTA Turcz. Betulaceae. **Alder.**

A rather handsome, medium-sized tree, native to Japan and Manchuria, with rounded-elliptic, slightly lobed leaves which are hairy beneath.

For previous introduction see No. 65912.

73404. ARTEMISIA INCANA (L.) Druce. Asteraceae. **Wormwood.**

An ornamental hardy bush having intense gray foliage which becomes blue with age.

73405. ARTEMISIA LACTIFLORA Wall. Asteraceae.

An ornamental white-flowered hardy herbaceous perennial native to Nepal.

73406. ASTRAGALUS MASSILIENSIS (Mill.) Lam. Fabaceae.

An attractive slow-growing spiny shrub with white flowers; native to western Europe.

73407. FAGELIA VIOLACEA (Cav.) Kuntze (*Calceolaria violacea* Cav.). Scrophulariaceae.

A shrubby evergreen plant from Chile with an abundance of showy purple-mauve flowers.

73408 to 73410. CASSINIA spp. Asteraceae.

73408. CASSINIA FULVIDA Hook. f.

An ornamental heathlike shrub which is covered with a yellowish down and produces white flowers. It is native to New Zealand.

For previous introduction see No. 72788.

73409. CASSINIA LEPTOPHYLLA (Forst.) R. Br.

A heathlike evergreen shrub 4 feet high, with silver-tinted foliage. Native to New Zealand.

73410. CASSINIA VAUVILLIERSII (Homb. and Jacq.) Hook. f.

An erect compact shrub, 6 to 10 feet high, with small narrow leathery leaves half an inch long and dense terminal corymbs of white flowers. Native to New Zealand.

For previous introduction see No. 72789.

73411 to 73414. CEANOTHUS DELILIANUS Spach. Rhamnaceae.

73411. *Arnoldii.* A compact bush with blue flowers.

73412. *Georges Simon.* A variety with lilac-rose flowers.

73401 to 73450—Continued.

73413. *Perle rose.* A variety with light-rose flowers.

73414. *Topaze.* A variety with panicles of pure blue flowers.

73415. CERATOSTIGMA GRIFFITHII C. B. Clarke. Plumbaginaceae.

A handsome shrub with bronzy leaves and dense clusters of blue flowers. Native to the Himalayas.

73416 to 73421. CISTUS spp. Cistaceae. **Rockrose.**

73416. CISTUS CYPRIUS Lam.

A stout ornamental bush up to 6 feet high, with narrow-oblong leaves and large white flowers. Native to southern Europe.

73417. CISTUS FLORENTINUS Lam.

For previous introduction and description see No. 73264.

73418. CISTUS OBTUSILOBUS Hort.

A dwarf spreading bush with small clusters of white flowers, which does well in partial shade.

73419. CISTUS PURPUREUS Lam.

For previous introduction and description see No. 73265.

73420. CISTUS ROSMARINIFOLIUS Pourr.

A low shrub, from southeastern Europe, with a profusion of small yellow flowers.

73421. CISTUS VILLOSUS L.

An erect hairy shrub, 3 to 4 feet high, with wrinkled gray-green leaves and one to three reddish purple flowers about 2 inches in diameter. Native to the Mediterranean region.

For previous introduction see No. 67350.

73422. CLEMATIS GLOBULOSA Hort. Ranunculaceae.

A semihardy climbing clematis, a hybrid between *Clematis scottii* and *C. coccinea*, which has small purple flowers.

73423. CLERODENDRUM TRICHOTOMUM FARGESII (Dode) Rehder. Verbenaceae.

A rapid-growing Chinese shrub, with dark-green or purplish, strongly veined, oval leaves and fragrant whitish flowers, borne in summer in panicles. The globular, peacock-blue fruits, about the size of peas, are set on the purple or crimson persistent calyx.

For previous introduction see No. 67638.

73424. CLERODENDRUM FOETIDUM Bunge. Verbenaceae. **Rose glory bower.**

A semihardy evergreen Chinese shrub, up to 5 feet high, with dark-crimson flowers.

73425. COPROSMA ACEROSA A. Cunn. Rubiaceae.

A low spreading evergreen shrub with prostrate wiry stems and attractive sky-blue berries. Native to New Zealand.

73426. COPROSMA PETRIEI Cheeseman. Rubiaceae.

A dwarf shrub, with prostrate stems, small leaves, and purplish fruits. Native to New Zealand.

73427. CORIARIA TERMINALIS XANTHOCARPA Rehd. and Wils. Coriariaceae.

A semihardy shrubby perennial with amber-colored fruits. Native to the Himalayas.

73401 to 73450—Continued.

73428. CORYLOPSIS WILLMOTTIAE Rehd. and Wils. Hamamelidaceae.
Willmott winter hazel.

A deciduous shrub, up to 12 feet high, native to central China. The leaves, 1 to 3 inches long, are oval or somewhat heart-shaped with sinuate margins, and the fragrant yellow flowers, which appear in early spring, are in racemes about 3 inches long.

For previous introduction see No. 65768.

73429. COTONEASTER FROEBELLII Hort. Malaceae.

A hardy shrub of graceful habit, with large pale-green leaves and large scarlet berries.

73430. CHAENOMELES sp. Malaceae.
Chinese quince.

Forrest No. 24781. A hardy ornamental shrub, native to southwestern China.

73431 to 73435. DEUTZIA spp. Hydrangeaceae.

73431. DEUTZIA LONGIFOLIA VEITCHII (Veitch) Rehder. **Long-leaf deutzia.**

This deutzia, from Yunnan, China, which bears its large flowers in dense many-flowered corymbs, is one of the handsomest of the genus, but has proved hardy only under protection at the Arnold Arboretum, Jamaica Plain, Mass.

For previous introduction see No. 66560.

73432. DEUTZIA MONBEIGII W. W. Smith.

A hardy ornamental shrub from southwestern China, about 1 meter high, with narrowly oval or oval leaves about 2 centimeters long and small cymes of white flowers.

73433. DEUTZIA SCABRA Thunb.

Variety *elegantissima*. A tall ornamental shrub, a hybrid between *Deutzia scabra* and *D. discolor purpurascens*, with carmine buds and pink flowers.

73434. DEUTZIA SETCHUENENSIS Franch.

A handsome Chinese shrub with corymbs of large white flowers.

73435. DEUTZIA WILSONI Duthie.

A very handsome Chinese shrub with reddish brown bark, soon peeling, and scabrous oblanceolate leaves, 3 to 5 inches long. The white flowers, nearly an inch across, are in open corymbs, and the petal margins are wavy and hooded.

For previous introduction see No. 66289.

73436. HYDRANGEA SERRATA (Thunb.) DC. Hydrangeaceae.

A small ornamental Japanese shrub with dark-green leaves and pale-pink flowers.

For previous introduction see No. 43848.

73437. HYPERICUM sp. Hypericaceae.

Wilson No. 256. A hardy bush of rounded habit, with a profusion of golden yellow flowers.

73438. ILEX YUNNANENSIS Franch. Aquifoliaceae.

A slow-growing evergreen holly with spineless oval leaves and red fruits. Native to western China.

73439. LESPEDEZA CYRTOBOTRYA Miquel. Fabaceae.

A small deciduous bush clover, native to Japan and Chosen, which bears racemes of rosy purple, pea-shaped flowers in midsummer.

For previous introduction see No. 66294.

73401 to 73450—Continued.

73440 to 73442. LONICERA spp. Caprifoliaceae.

73440. LONICERA CHAETOCARPA Rehder.
Honeysuckle.

Lonicera chaetocarpa was originally collected in Kansu, western China, by E. H. Wilson. It is described (Curtis's Botanical Magazine, pl. 8804) as a shrub of compact habit about 5 feet in height. The oblong leaves are bright green and more or less hairy, and the primrose-yellow flowers are an inch or more in length, opening in early June.

For previous introduction see No. 66297.

73441. LONICERA PILEATA YUNNANENSIS (Franch.) Rehder. **Privet honeysuckle.**

A yellow-flowered shrub of creeping prostrate habit, from western China.

73442. LONICERA SYRINGANTHA Maxim.
Lilac honeysuckle.

A handsome bush honeysuckle with lilac-purple flowers, native to China.

For previous introduction see No. 54058.

73443. MELALEUCA SQUAMEA Labill. Myrtaceae.

A tall rigid semihardy shrub with spikes of purplish or yellow flowers. Native to Australia.

73444. PERNETTYA MUCRONATA (L. f.) Gaud. Ericaceae. **Broadleaf pernettya.**

According to W. J. Bean (Trees and Shrubs Hardy in the British Isles, vol. 2, p. 127), this is one of the finest ornamental shrubs, native to South America about the Straits of Magellan. It is one of the hardiest from that continent, and is rarely injured by frost in the neighborhood of London. The shrub is evergreen, 2 to 5 feet high, and spreads freely by suckers, forming ultimately a dense, low thicket. The white nodding flowers, one-fourth of an inch long, are produced singly in the axils of the leaves at the ends of the shoots. The round berries, up to half an inch in diameter, vary in color from white to pink, lilac-crimson purple, or almost black, and remain on the branches throughout the winter and following spring. At Kew, near London, the berries are untouched by the birds.

For previous introduction see No. 62286.

73445. POTENTILLA FRUTICOSA PARVIFOLIA (Fisch.) Wolf. Rosaceae.

A hardy dwarf shrub with small leaves and bright-yellow flowers. Native to China.

73446. PYRACANTHA CRENULATA RODGERSIANA A. B. Jacks. Malaceae. **Firethorn.**

A low evergreen shrub with bright-green leaves, white flowers, and yellow berries. Native to southwestern China.

73447. ROSA DAVIDI Crepin. Rosaceae.
David rose.

A pink-flowered, orange-fruited rose 3 to 18 feet high, native to western Szechwan, China, at altitudes of 4,000 to 9,000 feet. It is the nearest Chinese relative of *Rosa macrophylla* of the western Himalayas.

For previous introduction see No. 61986.

73448. SKIMMIA REEVESIANA RUBELLA (Carr.) Rehder. Rutaceae.

A dwarf evergreen of dainty habit with reddish stems and flower buds.

73449. STRANVAESIA DAVIDIANA UNDULATA (Decaisne) Rehd. and Wils. Malaceae.

For previous introduction and description see No. 73283.

73401 to 73450—Continued.

73450. SYRINGA YUNNANENSIS Franch. Oleaceae. **Yunnan lilac.**

A handsome species related to *Syringa wilsonii*, but with pale, pure pink flowers in large panicles. The downy leaves have a distinct red midrib, the color being continued through the leafstalk.

For previous introduction see No. 66315.

73451 to 73453.

From Avery Island, La. Presented by E. A. McIlhenny, at the request of R. A. Young, Bureau of Plant Industry. Received April, 1927.

73451. FORTUNELLA sp. Rutaceae. **Kumquat.**

Owrie. Scions of a hybrid kumquat which is the result of a cross of the *Meiwa* (pollen parent) on the *Nagami*. The almost round fruits, up to 1½ inches in diameter, have sweet skin and flesh and contain neither acid nor irritating oil.

73452. PHYLLOSTACHYS HENRYI Rendle. Poaceae. **Bamboo.**

Plants of the edible bamboo of central China.

73453. PHYLLOSTACHYS sp. Poaceae. **Bamboo.**

Plants of a bamboo originally obtained from a Japanese importer in California. The yellowish green culms are thoroughly coated with a white waxy bloom which gives them a grayish white appearance.

73454. RUBUS sp. Rosaceae. Raspberry.

From Avery Island, La. Plants collected by R. A. Young, Bureau of Plant Industry. Received April 9, 1927.

Locally grown plants of a red Chinese variety originally collected by F. N. Meyer in China. The berries are excellent for home use.

73455 to 73469.

From Granada, Spain. Plants presented by Juan Leyva. Received April 11, 1927.

73455 to 73458. PRUNUS spp. Amygdalaceae.

73455. PRUNUS ARMENIACA L. **Apricot.**

Boulbon.

73456 and 73457. PRUNUS CERASUS L. **Sour cherry.**

73456. *Negro de la Rivera.*

73457. *Risada de Kentar.*

73458. PRUNUS DOMESTICA L. **Plum.**

Encarnada fina.

73459. PUNICA GRANATUM L. Punicaceae. **Pomegranate.**

Rojie.

73460 to 73462. PYRUS COMMUNIS L. Malaceae. **Pear.**

73460. *Calabacita Real.*

73461. *Cermeño.*

73462. *Madrileño.*

73463 to 73469. VITIS VINIFERA L. Vitaceae. **European grape.**

Spanish varieties.

73463. *Chanez Rosada.*

73464. *Corazonde Cabrito.*

73465. *Imperial.*

73466. *Jeresana Blanca.*

73455 to 73469—Continued.

73467. *La Mollar.*

73468. *Real Blanca.*

73469. *Santa Paula.*

73470 to 73472.

From Nanking, China. Seeds presented by the Chinese nurseries. Received April 1, 1927.

73470. DAVIDIA INVOLUCRATA Baill. Cornaceae. **Dove tree.**

The Chinese dove tree, as this is sometimes called, is a native of the mountain forests of central and western China. In its native home it becomes a tree 75 feet tall, with a shapely pyramidal crown. When in bloom the tree is unusually striking because of the two or three large, snow-white bracts which subtend each flower. These bracts are of unequal size, the largest being 4 to 8 inches long and 2 to 4 inches broad. The bright-green, oval, sharply toothed leaves are 3 to 6 inches long.

For previous introduction see No. 65439.

73471. HALESIA MACGREGORII Chun. Styracaceae.

An ornamental tree up to 80 feet, with large white flowers and fruits over an inch long. It is a southern Chinese relative of the American silverbell (*Halesia carolina*.)

73472. TORREYA JACKII Chun. Taxaceae.

A hardy yewlike evergreen tree from eastern China, of possible value as an ornamental.

73473 to 73501.

From Persia. Seeds obtained from the Persian exhibit at the Sesquicentennial Exposition, Philadelphia, Pa. Received April 1, 1927.

Persian-grown seeds.

73473 and 73474. ALLIUM CEPA L. Liliaceae. **Onion.**

73473. No. 1. 73474. No. 2.

73475. BETA VULGARIS L. Chenopodiaceae. **Beet.**

73476 and 73477. CICER ARIETINUM L. Fabaceae. **Chick-pea.**

73476. Small black seeds.

73477. Large white seeds.

73478. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

73479. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

73480. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

73481. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

73482. IPOMOEA sp. Convolvulaceae. **Morning-glory.**

73483. IRIS sp. Iridaceae.

73484 to 73486. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

73484. No. 1. 73486. No. 3.

73485. No. 2.

73487. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

73488. MELISSA OFFICINALIS L. Menthaceae. **Balm.**

73489 and 73490. NIGELLA SATIVA L. Ranunculaceae.

73489. No. 1. 73490. No. 2.

73491. OCIMUM BASILICUM L. Menthaceae. **Basil.**

73473 to 73501—Continued.

73492. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

73493 to 73495. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

73493. No. 1. 73495. No. 3.

73494. No. 2.

73496. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

73497 and 73498. SESAMUM ORIENTALE L. Pedaliaceae. **Sesame.**

73497. No. 1. 73498. No. 2.

73499. TRIFOLIUM SUAVEOLENS Willd. Fabaceae. **Fragrant clover.**

73500. TRIGONELLA FOENUM-GRAECUM L. Fabaceae. **Fenugreek.**

73501. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

73502. CORYLUS CHINENSIS Franch. Betulaceae. Chinese hazel.

From Nanking, China. Seeds purchased from the Chinese nurseries. Received April 1, 1927.

The Chinese hazel is closely allied to the tree hazel (*Corylus colurna*), differing in leaf and stem characters. It becomes a tall tree, sometimes over a hundred feet high, with heart-shaped leaves about 7 inches long. The nuts are borne in clusters of four to six. It is native to western China.

For previous introduction see No. 63680.

73503. PITTOSPORUM FLORIBUNDUM Wight and Arnott. Pittosporaceae.

From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. Received April 2, 1927.

For previous introduction and description see No. 73153.

73504 and 73505. NICOTIANA TABACUM L. Solanaceae. Tobacco.

From Klaten, Java. Seeds presented by the director, Proefstation voor Vorstenlandsche Tabak. Received April 2, 1927.

Java varieties.

73504. *Santiago.* 73505. *Timor.*

73506. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Buitenzorg, Java. Seeds presented by Dr. L. Koch, chief, plant-breeding station for annual crops. Received April 4, 1927.

A local variety which grows to a height of 2.5 meters in about 6 months.

73507 to 73521.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 2, 1927.

73507. CALOTROPIS PROCERA Ait. Asclepiadaceae.

No. 1153. Georgetown, Gambia, January 7, 1927. The giant milkweed which becomes a small tree. The stems furnish fiber and the floss is used for stuffing mattresses. The juice or sap is poisonous when taken internally; it is mixed with salt to remove hair from hides.

For previous introduction see No. 54451.

73507 to 73521—Continued.

73508. CARPODINUS DULCIS Sabine. Apocynaceae.

No. 1146. Near Jala Experiment Station, Sierra Leone, January 21, 1927. A low shrub with edible fruits the size of a large plum, which is supposed to yield a species of rubber. The latex when coagulated is used as birdlime.

73509. CHRYSOPHYLLUM PRUNIFORME Engler. Sapotaceae.

No. 1152. Near Jala Experiment Station, Sierra Leone, January 21, 1927. A tree 30 feet high related to the star apple which should be grown and tested as a stock for it and for breeding purposes.

73510. COMBRETUM MICRANTHUM Don. Combretaceae.

No. 1137. En route from Georgetown, to Kuntaur, Gambia, January 9, 1927. A tree 20 to 25 feet high, producing axillary racemes of rather small, pinkish flowers which are not very conspicuous, and attractive seed pods.

73511. GOSSYPIUM sp. Malvaceae. **Cotton.**

No. 1147. January 21, 1927. A native cotton which grows more or less wild near the Jala Experiment Station, Sierra Leone.

73512. HEERIA sp. Anacardiaceae.

No. 1138. January 9, 1927. A tree of small size and attractive shape, found on the dry soil of Gambia, between Georgetown and Kuntaur.

73513. HONCKENYA FICIFOLIA Willd. Tiliaceae.

No. 1151. Jala, Sierra Leone, January 21, 1927. The *bolo-bolo* of the natives of Nigeria. A very decorative plant with large showy rose pink flowers which fade rapidly when the plants are cut. The fiber is said to be of value.

For previous introduction see No. 67572.

73514. INDIGOFERA STENOPHYLLA Guill. and Perr. Fabaceae.

No. 1139. Gambia, January 10, 1927. An erect herbaceous plant 1 to 3 feet high, with rose-colored flowers.

73515. MELINIS MINUTIFLORA Beauv. Poaceae. **Molasses grass.**

No. 1142. Jala Experiment Station, Sierra Leone, January, 1927. *Watakala* grass of Sierra Leone which is said to be identical with the molasses grass.

73516. PAHUDIA BRACTEATA (Vog.) Prain (*Afzelia bracteata* Vog.). Caesalpiniaceae.

No. 1136. En route from Monrovia to Mount Barkley, Liberia, January, 1927. A small handsome shapely tropical tree producing scarlet flowers, which have only one petal, and curved woody pods 6 inches long and 1 inch thick. When the pods open 10 or more brilliant scarlet seeds are exposed, the scarlet part being the arillus which covers two-thirds or more of the chocolate-brown seeds. These seeds are made into watch charms in West Africa and are very attractive and interesting.

73517. STERCULIA TOMENTOSA Guill. and Perr. Sterculiaceae.

No. 1148. A tree found on very dry land near McCarthys Island, Gambia. The flowers have a faint unpleasant odor, and the pods have brittle hairs on them though otherwise they are attractive. A gum resembling gum tragacanth exudes from the stem.

73507 to 73521—Continued.

73518. TETRACERA ALNIFOLIA Willd. Dilleniaceae.

No. 1145. Freetown, January 23, 1927. A large ornamental vine with panicles of white flowers and scarlet fruits which when open expose black seeds covered with a brilliant scarlet arillus, making the vine quite showy.

73519. TRACHYPHRYNIUM sp. Marantaceae.

No. 1150. January 22, 1927. A handsome tropical foliage plant with large green leaves, found in the jungle on the Taia River, near Mano, Sierra Leone.

73520. PHYSEDRA EGLANDULOSA Hutchins. and Dalziel. Cucurbitaceae.

No. 1140. Monrovia, Liberia, January 28, 1927. A tropical African vine with ornamental red fruits.

For previous introduction see No. 70926.

73521. (Undetermined.)

No. 1154. Tiama, near Jala, Sierra Leone, January 20, 1927. A climbing shrub with pods 6 inches long and characteristic brown seeds which have long silky hairs attached to them. It may prove useful as a source of rubber.

73522 to 73548.

From Cambridge, England. Seeds presented by H. G. Carter, director, botanic garden, University of Cambridge. Received April 6, 1927.

73522 to 73529. ALLIUM spp. Liliaceae.

73522. ALLIUM CARINATUM L.

The leaves of this European species are narrowly linear, and the lilac-purple flowers are produced in a comparatively large head.

It is found throughout southern Europe, especially in the Alps.

For previous introduction see No. 58676.

73523. ALLIUM CYANEUM Regel.

A rather dwarf plant, less than a foot high, with small pendulous bright-blue flower heads. Native to northern China.

For previous introduction see No. 66426.

73524. ALLIUM NARCISSIFLORUM Vill.

An elegant Italian species, about 9 inches high, with nodding heads of beautiful rose-colored flowers.

For previous introduction see No. 67344.

73525. ALLIUM OBLIQUUM L.

A species cultivated in Siberia as a substitute for garlic. It has a narrowly egg-shaped bulb and a stem up to 3 feet in height.

For previous introduction see No. 59340.

73526. ALLIUM ODORUM L.

This onion, which is native to Europe, is cultivated in Japan for the sake of its leaves which are produced abundantly in the spring and are eaten as greens.

For previous introduction see No. 60229.

73527. ALLIUM OSTROWSKIANUM Regel.

This species, native to Turkestan, has rose-colored flowers produced freely in many-flowered umbels on scapes 6 inches high.

For previous introduction see No. 66533-

73522 to 73548—Continued.

73528. ALLIUM SCORODOPRASUM L.

Variety *sibiricum*. The sand leek or rocambole of Europe and Asia Minor resembles garlic, but has smaller bulbs of milder flavor which are produced at the tip of the stem as well as at its base.

For previous introduction see No. 59387.

73529. ALLIUM SCORODOPRASUM BABINGTONII (Borer) Richter.

This is a much larger plant than the typical form, the scape being 4 to 6 feet high, and the more numerous leaves are broader, sometimes 2 inches wide at the base. The flowers are pale reddish purple. The bulbous base of the plant is globose, with solid white bulbs attached to the hard white crown of the root. This variety is native to England and probably also to Ireland.

For previous introduction see No. 59388.

73530 to 73532. BERBERIS spp. Berberidaceae. **Barberry.**

73530. BERBERIS CHITRIA D. Don.

A spiny shrub, 6 feet or less high, with oblong leaves 1 to 3 inches long, deep-yellow or reddish flowers in long-stemmed panicles, and ovoid purple berries. Native to the Himalayas.

For previous introduction see No. 67347.

73531. BERBERIS DARWINII Hook.

An evergreen shrub, 6 feet or more high, from southern Chile. The orange flowers are succeeded by oval plum-colored berries.

For previous introduction see No. 53631.

73532. BERBERIS EMPETRIFOLIA Pers. **Crow barberry.**

A low, densely branched barberry, 1 or 2 feet high, with linear, bright-green leaves, and bluish black fruits. Native to southern South America.

For previous introduction see No. 67348.

73533. CORIARIA NEPALENSIS Wall. Coriariaceae.

A shrub with arching branches, broadly heart-shaped leaves, small green flowers in short racemes, and small black fruits. Native to southwestern China and northern India.

73534. CORIARIA TERMINALIS XANTHOCARPA Rehd. and Wils. Coriariaceae.

An ornamental shrub, up to 1 meter in height, with pinkish flowers and small yellow fruits. Native to western China.

73535. CYCLAMEN NEAPOLITANUM Tenore. Primulaceae.

A hardy perennial, 3 inches high, with red flowers. Native to Italy.

73536 to 73544. CYTISUS spp. Fabaceae.

73536. CYTISUS BIFLORUS L'Herit. **Broom.**

A leguminous shrub 3 feet high, with slender branches and leaflets with silky lower surfaces. The yellow flowers are single or in pairs. Native to Europe and western Asia.

For previous introduction see No. 67352.

73537. CYTISUS DANUBIALIS Velen.

A yellow-flowered shrub, about 2 feet high, native to Bulgaria.

73522 to 73548—Continued.

73538. CYTISUS HIRSUTUS L.

A hardy yellow-flowered shrub, 5 feet high, native to southern Europe.

73539. CYTISUS MONSPESSULANUS L.

A leguminous shrub, 10 feet high, with small racemes of yellow flowers.

For previous introduction see No. 67353.

73540. CYTISUS NIGRICANS L. **Spike broom.**

A leguminous shrub about 3 feet high with racemes of yellow flowers. Native to Austria.

73541. CYTISUS PRAECOX Wheeler. **Warminster broom.**

An ornamental shrub with pale sulphur-yellow flowers. A hybrid between *Cytisus purgans* and *C. multifloris*.

73542. CYTISUS PURGANS (L.) Spach. **Province broom.**

A yellow-flowered leguminous shrub about 3 feet high. Native to southern France and Spain.

For previous introduction see No. 67354.

73543. CYTISUS PURPUREUS Scop. **Broom.**

An erect or procumbent shrub, 2 feet or less in height, with small clusters of purple flowers and black pods. Native to southern Europe.

For previous introduction see No. 67355.

73544. CYTISUS SESSILIFOLIUS L. **Sessile broom.**

A low shrub, 2 to 4 feet high, with erect branches, nearly sessile leaves, and short racemes of yellow flowers. Native to southern Europe.

For previous introduction see No. 67030.

73545 to 73547. IRIS spp. Iridaceae.

73545. IRIS CHRYSOGRAPHES Dykes. **Gold-vein iris.**

One of the handsomest of the Siberian irises; the velvety dark-purple flowers are brightened by golden reticulations at the throat.

For previous introduction see No. 67033.

73546. IRIS SISYRINCHIUM L. **Moraea iris.**

A tender, rather low iris, 6 inches to a foot high, native to southern Europe, Asia, and Africa. The fugitive flowers are lilac-purple with a yellow spot on the outer segments.

For previous introduction see No. 67366.

73547. IRIS WILSONI Wright.

An iris, about a foot high, from western China. The flowers are yellow with the falls purple-veined.

73548. LILIUM FARRERI Turrill. Liliaceae. **Lily.**

From a packet of mixed seeds collected in China by the well-known botanical explorer, Reginald Farrer, there was grown this handsome lily, described in Curtis's Botanical Magazine (pl. 8847) as having erect stems, nearly 3 feet in height, and numerous narrow leaves scattered along the entire stem. The relatively small but fragrant flowers, white with purple spots, are terminal, and either solitary or in loose 6-flowered umbels. This lily has proved hardy in the mild-wintered region of southeastern England.

For previous introduction see No. 61747.

73549 to 73552.

From Brignoles, France. Seeds presented by René Salgues, director, Brignoles Botanic Station. Received April 8, 1927.

73549. ERICA MULTIFLORA L. Ericaceae.

A hardy evergreen shrub, up to 2 feet high, with rose-colored flowers.

73550. TRIFOLIUM SCABRUM L. Fabaceae.

An annual, white-flowered clover about 3 inches high.

73551. TRIFOLIUM TOMENTOSUM L. Fabaceae.

A dense, low-growing, annual or biennial clover, with stems usually less than 8 inches long. Native to dry barren places in the Mediterranean region.

For previous introduction see No. 64995.

73552. VICIA HYBRIDA L. Fabaceae. **Vetch.**

An annual vetch, native to the Mediterranean region, and requiring about the same climatic conditions as the common vetch (*Vicia sativa*). It is a less vigorous grower than either common (*V. sativa*) or hairy vetch (*V. villosa*), and for this reason it is less well adapted for growing under cultivation. However, it may be of value for pasturage. (*Note by Roland McKee under No. 52272.*)

73553. DESMONCUS OXYACANTHOS Mart. Phoenicaceae. **Palm.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received May 16, 1927.

A tropical American climbing palm, having scattered pinnate leaves armed with hooked spines and small red fruits.

73554 to 73558. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Dominica, British West Indies. Seeds presented by F. L. Squibbs, second assistant curator, botanic gardens. Received April 12, 1927.

Locally grown seeds.

73554. No. 1. *Blood.*

73555. No. 2. *Toetola.*

73556. No. 3. *Bahama.*

73557. No. 4. *Speckled.*

73558. *Early Asha.*

73559. CYPERUS ESCULENTUS L. Cyperaceae. **Chufa.**

From Valencia, Spain. Tubers purchased through Clement S. Edwards, American consul. Received April 18, 1927.

Spanish-grown tubers.

For previous introduction see No. 52899.

73560. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From Blairgowrie, Perth, Scotland. Seeds presented by E. A. Foley, agricultural commissioner, London, England, through L. H. Dewey, Bureau of Plant Industry. Received April 18, 1927.

The fiber flax variety *J. W. S.* was originated by John W. Stewart, County Antrim, Ireland. It has been carefully propagated under the direction of the Linen Research Association of Belfast, and increased under contract by the Flax Industry Development Society of Yeovil, Sussex, England. The *J. W. S.* variety grows well in the cool, moist

climate of Ireland and Scotland, where it gives a very much better yield of fiber than that from Blue Blossom or Riga seed. Tests of *J. W. S.* by the Office of Fiber Plants in the plots of fiber flax at East Lansing, Mich., indicate that it is not well adapted to warmer and drier conditions. Like all of the best fiber flaxes, it yields very little seed. (*Dewey.*)

73561. JUGLANS REGIA L. Juglandaceae. **Walnut.**

From Tashkent, Turkestan. Seeds presented by Hilaria Rajkova, botanic garden. Received April 12, 1927.

Variety *fallax*. A form with very thick-shelled nuts.

73562 to 73594.

From Manchuria. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received April 7, 1927.

73562 to 73570. HORDEUM spp. Poaceae. **Six-rowed barley.**

73562. HORDEUM VULGARE NIGRUM (Willd.) Beaven.

No. 9053. Obtained through the economic bureau of the South Manchurian Railway.

73563 to 73570. HORDEUM VULGARE PALLIDUM Seringe.

Numbers 73563 and 73564 were obtained through the economic bureau of the South Manchurian Railway.

73563. No. 9051. **73564.** No. 9052.

Numbers 73565 to 73570 were obtained through D. McLorn, postal commissioner, Harbin.

73565. No. 9075. **73568.** No. 9087.

73566. No. 9080. **73569.** No. 9090.

73567. No. 9083. **73570.** No. 9093.

73571 to 73575. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

Manchurian-grown seeds obtained through D. McLorn, postal commissioner, Harbin.

73571. No. 9076. **73574.** No. 9085.

73572. No. 9078. **73575.** No. 9092.

73573. No. 9082.

73576 to 73587. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

Numbers 73576 to 73579 were obtained through the economic bureau of the South Manchurian Railway.

73576. No. 9047. **73578.** No. 9049.

73577. No. 9048. **73579.** No. 9050.

Numbers 73580 to 73587 were obtained through D. McLorn, postal commissioner, Harbin.

73580. No. 9071. **73584.** No. 9081.

73581. No. 9072. **73585.** No. 9084.

73582. No. 9073. **73586.** No. 9088.

73583. No. 9077. **73587.** No. 9091.

73588 to 73594. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

Numbers 73588 to 73590 were obtained through the economic bureau of the South Manchurian Railway.

73588. No. 9054. **73590.** No. 9056.

73589. No. 9055.

Numbers 73591 to 73594 were obtained through D. McLorn, postal commissioner, Harbin.

73562 to 73594—Continued.

73591. No. 9074. **73593.** No. 9086.

73592. No. 9079. **73594.** No. 9089.

73595 to 73619.

From Tashkent, Turkestan. Seeds presented by Hilaria Rajkova, botanic garden. Received April 8, 1927.

73595 to 73601. ALLIUM spp. Liliaceae.

73595. ALLIUM BARSCZEWSKII Lipsky.

A hardy bulbous plant a foot or more in height, with a rounded umbel of rose-purple flowers. Native to Turkestan.

73596. ALLIUM BODEANUM Regel.

A white-flowered onion about a foot high, from Turkestan.

73597. ALLIUM CAESIUM Schrenk.

A lavender-flowered onion, native to Turkestan.

73598. ALLIUM HYMENORRHIZUM Ledeb.

A perennial moisture-loving Russian species with linear leaves and purplish violet flowers.

For previous introduction see No. 66428.

73599. ALLIUM JESDIANUM Boiss. and Buhse.

For previous introduction and description see No. 73178.

73600. ALLIUM KARATAVIENSE Regel.

An onion, native to Turkestan, with broad leaves and dense umbels of pink flowers.

For previous introduction see No. 66951.

73601. ALLIUM SUWOROWI Regel.

A hardy bulbous plant with very narrow flat leaves up to 40 centimeters long and hemispherical umbels of fragrant violet-rose flowers. Native to the Kirghiz Desert, central Asia.

73602. AMYGDALUS PETUNNIKOWI Litw. Amygdalaceae.

A hardy thorny shrub, up to 1 meter high, with fruit about 2 centimeters long, which may prove useful as a stock for stone fruits. Native to Turkestan.

73603. EREMURUS LACTIFLORUS Fedtsch. Liliaceae.

A tall hardy bulbous drought-resistant plant with a spike of white flowers on a long flower stalk. Native to Turkestan.

73604. HALIMODENDRON HALODENDRON (Pall.) Voss. Fabaceae. **Salt tree.**

A drought-resistant hardy ornamental shrub, 6 feet high, with pink flowers. Native to Turkestan.

For previous introduction see No. 60341.

73605. HEDYSARUM JAXARTICUM M. Pop. Fabaceae.

A hardy herbaceous leguminous perennial native to western Asia.

73606. HEDYSARUM SEMENOWII Regel and Herd. Fabaceae.

An erect hardy herbaceous perennial native to Turkestan.

For previous introduction see No. 42193.

73607. LIMONIUM OTOLEPIS (Schrenk) Kuntze (*Statice otolepis* Schrenk). Plumbaginaceae. **Sea lavender.**

A perennial plant, native to Turkestan, with small narrowly ovate leaves and short spikes of white flowers.

For previous introduction see No. 61433.

73595 to 73619—Continued.

73608 to 73611. ONOBRYCHIS spp. Fabaceae.

73608. ONOBRYCHIS MEGALOBOTRYS Aitch. and Baker.

A hardy perennial, 2 to 3 feet high, with spikes of purple-veined flowers almost a foot in length. Native to western Asia.

73609. ONOBRYCHIS MICRANTHA Schrenk.

An annual erect leguminous plant with very narrow acute leaflets, stems about 2 feet high, and dull-yellow flowers. Native to Russia.

73610 and 73611. ONOBRYCHIS PULCHELLA Schrenk.

A low annual, less than a foot high, with narrow leaflets and pink flowers. Native to Russia.

73610. No. 1. **73611.** No. 2.

73612 to 73616. PRUNUS spp. Amygdalaceae.

73612 to 73614. PRUNUS CERASIFERA Ehrh.

Ornamental varieties of myrobalan plums.

73612. Variety *atroviolaceum.*

73613. Variety *flavis.*

73614. Variety *purpurea.*

73615. PRUNUS MAHALEB L. **Mahaleb cherry.**

Seeds grown in Turkestan; for testing as stock.

For previous introduction see No. 53415.

73616. PRUNUS PROSTRATA Labill. **Mountain cherry.**

A hardy bush cherry with small red fruits. Native to western Asia.

For previous introduction see No. 43869.

73617. PYRUS HETEROPHYLLA Regel and Schmalh. Malaceae.

A small hardy tree about 25 feet high, with white flowers and fruits like small pears.

For previous introduction see No. 44046.

73618. SORBUS TURKESTANICA (Franch.) Hedl. (*Pyrus turkestanica* Franch.). Malaceae.

A hardy shrub or small tree with purplish twigs, cream-colored flowers, and purplish fruits about half an inch long. Native to Turkestan.

73619. VICIA HYRCANICA Fisch. and Mey. Fabaceae. **Vetch.**

An annual yellow-flowered vetch cultivated in northern Persia and Armenia.

73620 to 73629. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From Valki, District of Kharkof, Russia. Seeds presented by Mr. Bordacoff, director, Ukraine station. Received April 13, 1927.

Locally grown varieties.

73620. No. 254.

73621. No. 403. District of Kherson.

73622. No. 404. District of Podolian.

73623. No. 500. District of Kharkof.

73624. No. 525. District of Cupians.

73625. No. 536. District of Kharkof.

73626. No. 634. District of Kherson.

73627. No. 635. District of Kherson; originally from France.

73620 to 73629—Continued.

73628. No. 688. District of Poltawa.

73629. No. 746. Ascania, Nova Tavia.

73630 and 73631. COFFEA spp. Rubiaceae. Coffee.

From Chiapas, Mexico. Seeds obtained through O. F. Cook, Bureau of Plant Industry. Received April 15, 1927.

73630. COFFEA ARABICA L.

Bourbon. An early-maturing variety; Mexican-grown seeds.

For previous introduction see No. 65236.

73631. COFFEA ARABICA MARAGOGIPE Froehn.

Maragogipe. A variety with large thick leaves and beans of excellent flavor. Mexican-grown seeds.

For previous introduction see No. 50626.

73632 and 73633. AGAVE FOURCROYDES Lem. Amaryllidaceae. Henequen.

From Nuevitas, Cuba. Suckers presented by M. T. Walsh, manager, Spanish-American Sisal Co., through L. H. Dewey, Bureau of Plant Industry. Received April 15, 1927.

Henequen varieties grown in Cuba.

73632. No. 1. **73633.** No. 2.

73634. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. Avocado.

From Spain. Scions collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 16, 1927.

No. 1295. Churiana, near Malaga, March 30, 1927. From a tree 20 years old which is a seedling of a century-old tree. The leathery green-skinned fruits are of the West Indian type and are said to be identical to those borne by the parent tree.

73635 and 73636.

From Brooksville, Fla. Plants obtained from the Plant Introduction Garden by R. A. Young, Bureau of Plant Industry. Received April 19, 1927.

73635. BAMBUSA VULGARIS Schrad. Poaceae. **Bamboo.**

Variety *thouarsii.* An Indian clump bamboo with bright-green stems, 20 to 80 feet high, and numerous branches bearing dense foliage.

For previous introduction see No. 21349.

73636. RUBUS sp. Rosaceae. **Raspberry.**

Said to be a Chinese red raspberry of value for home use in the South.

73637. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Kuala Lumpur, Federated Malay States. Seeds presented by B. Bunting, agriculturist, Department of Agriculture. Received April 8, 1927.

Locally grown seeds.

73638 to 73640. PHASEOLUS spp. Fabaceae.

From Rasikulu, Nadroga, Lautoka, Fiji Islands. Seeds presented by R. B. Howard. Received April 9, 1927.

Locally grown seeds.

73638 to 73640—Continued.

73638. PHASEOLUS AUREUS Roxb. **Mung bean.**

Chorta munga.

73639. PHASEOLUS CALCARATUS Roxb. **Rice bean.**

Burra munga.

73640. PHASEOLUS MUNGO L. **Urd.**

Urdi.

73641 to 73644. VITIS spp. Vitaceae. **Grape.**

From Montpellier, Herault, France. Plants purchased from Pépinières Richter. Received April 23, 1927.

French hybrid grapes.

73641. VITIS BERLANDIERI × LONGII.

Berlandieri Novo Mexicana R. 31.

73642 and 73643. VITIS BERLANDIERI × RUPESTRIS.

73642. *Rupestris × Berl R. 57.*

73643. *Rupestris × Berl R. 99.*

73644. VITIS BERLANDIERI × LONGII.

Rupestris × Berl R. 110.

73645. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, director, Estación Nacional Agronómica y Colegio de Agricultura. Received April 12, 1927.

Locally grown seeds.

73646 to 73648. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Port au Prince, Haiti. Seeds presented by Knowles A. Ryerson, Haiti Department of Agriculture. Received April 15, 1927.

Locally grown seeds.

73646. No. 1.

73647. No. 2.

73648. No. 3.

73649. PANICUM MILIACEUM L. Poaceae. **Proso.**

From Persia. Seeds obtained from the Persian exhibit at the Sesquicentennial Exposition, Philadelphia, Pa. Received April 1, 1927.

Persian-grown seeds.

73650 to 73663. ORYZA SATIVA L. Poaceae. **Rice.**

From Manchuria. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry, through the economic bureau of the South Manchurian Railway. Received April 17, 1927.

73650. No. 9057.

73651. No. 9058.

73652. No. 5059.

73653. No. 9060.

73654. No. 9061.

73655. No. 9062.

73656. No. 9063.

73657. No. 9064.

73658. No. 9065.

73659. No. 9066.

73660. No. 9067.

73661. No. 9068.

73662. No. 9069.

73663. No. 9070.

73664. ORYZA SATIVA L. Poaceae. **Rice.**

From Cuttack, Orissa, India. Seeds presented by D. R. Sethi, deputy director of agriculture. Received April 12, 1927.

Patna, a paddy variety from India.

73665. SESAMUM ORIENTALE L. Pedaliaceae. **Sesame.**

From the City of Mexico, Mexico. Seeds presented by Alexander W. Weddell, American consul general. Received April 15, 1927.

Locally grown seeds.

73666 to 73676. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Coimbatore, India. Seeds presented by R. O. Iliffe, paddy specialist. Received April 21, 1927.

Locally grown seeds.

73666. No. 1. From Berhampur, Ganjam district.

73667. No. 2. *Desavali.* From Vinukonda, Guntur district.

73668. No. 3. From Tenali, Guntur district.

73669. No. 4. From Nandyal, Kurnool district.

73670. No. 5. From Markapur, Kurnool district.

73671. No. 6. *Erranthulu.* From Kurnool district.

73672. No. 7. *Pulakanthulu.* From Kurnool district.

73673. No. 8. From Adoni.

73674. No. 9. From Tirupathur, North Arcot district.

73675. No. 10. From Coimbatore.

73676. No. 11. From Salem.

73677 to 73683. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, director, Estación Naciónal Agronómica y Colegio de Agricultura. Received April 22, 1927.

Locally grown seeds.

73677. No. 1. *Albejas.*

73678. No. 2. *Jinas.*

73679. No. 3–a. *Todo el año.*

73680. No. 3–b. *Todo el año.*

73681. No. 4. *Burque's.*

73682. No. 5.

73683. No. 6.

73684. SACCHARUM OFFICINARUM L. Poaceae. **Sugar cane.**

From Pusa, Bihar, India. Cuttings presented by the imperial agriculturist, Agricultural Research Institute, through E. W. Brandes, Bureau of Plant Industry. Received April 23, 1927.

A locally grown variety.

73685. CITRUS sp. Rutaceae.

From Seattle, Wash. Seeds obtained by W. T. Swingle, Bureau of Plant Industry. Received April 26, 1927.

Seeds from fruits possibly of Japanese origin.

73686. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae.

From Lakeland, Fla. Cuttings collected by Gordon Galloway, Takoma Park, D. C. Received April 13, 1927.

Cuttings from an unusually cold-resistant tree.

73687. DAHLIA MAXONII Safford. Asteraceae.

From the city of Guatemala, Guatemala. Seeds presented by Dr. Jorge Salas, director general of agriculture, through B. E. Gilbert, Kingston, R. I. Received April 21, 1927.

A tree dahlia, native to Guatemala, where it becomes about 15 feet high and bears clusters of large lilac-pink flowers. A detailed description of this tree dahlia with a discussion of its horticultural possibilities is given in the Journal of Heredity, volume 11, pages 265 to 268, 1920.

For previous introduction see No. 56665.

73688. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, director, Estación Nacional Agronómica y Colegio de Agriculture. Received April 23, 1927.

Locally grown seeds.

73689. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Kotoni, Sapporo, Japan. Seeds presented by the Hokkaido Agricultural Experiment Station, through C. R. Ball, Bureau of Plant Industry. Received April 23, 1927.

Hokuiku No. 44.

73690. NYPA FRUTICANS Wurmb. Phoenicaceae. **Nipa palm.**

From Manila, Philippine Islands. Seeds presented by S. Youngberg, director, Bureau of Agriculture. Received April 26, 1927.

According to Brown and Merrill (Philippine Palms and Palm Products, p. 98), the nipa palm has a stout creeping underground stem and the pinnate leaves, which are in erect clusters, are about 25 feet long. The flat fruits, 5 inches long, 4 inches wide, and 2 inches thick, are crowded in a large round head which is borne on a special erect stalk. The juice obtained by cutting this stalk just below the fruiting head is a promising source of sugar and alcohol. The leaves are extensively used for thatching and for making baskets and mats.

For previous introduction see No. 67228.

73691. TOLUIFERA sp. (*Myroxylon* sp.). Fabaceae.

From Kandy, Ceylon. Seeds presented by Dr. Andreas Nell. Received April 21, 1927.

A tropical American leguminous shade tree with pinnate leaves and white flowers.

73692. VIGNA sp. Fabaceae.

From Luchenza, Nyasaland Protectorate, Africa. Seeds presented by L. S. Norman. Received April 23, 1927.

A herbaceous perennial with large roots which are said to yield a gum used for waterproofing baskets. The seeds are eaten by the natives.

73693 and 73694.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received April 18, 1927.

73693. ADONIDIA MERRILLII Beccari. Phoenicaceae. **Palm.**

A medium-sized palm with graceful pinnate leaves and moderately large bunches of crimson fruits an inch long.

For previous introduction see No. 46531.

73694. PYRENOGLYPHIS sp. Phoenicaceae. **Palm.**

A large handsome spiny palm with large clusters of pinnate leaves. Native to Panama.

73695 to 73712.

From Manchuria. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry, through D. McLorn, postal commissioner, Harbin. Received April 27, 1927.

Manchurian-grown seeds.

73695. AVENA SATIVA L. Poaceae. **Oats.**

No. 9134.

73696. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

No. 9112.

73697 to 73702. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

73697. No. 9102.	73700. No. 9123.
73698. No. 9106.	73701. No. 9127.
73699. No. 9119.	73702. No. 9136.

73703 to 73712. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

73703. No. 9101.	73708. No. 9122.
73704. No. 9105.	73709. No. 9126.
73705. No. 9108.	73710. No. 9131.
73706. No. 9114.	73711. No. 9133.
73707. No. 9118.	73712. No. 9135.

73713. HICORIA PECAN (Marsh.) Britton. Juglandaceae. **Pecan.**

From Malaga, Spain. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 28, 1927.

A local variety obtained in the market.

73714. ALLIUM CEPA L. Liliaceae. **Onion.**

From Valencia, Spain. Seeds purchased through Clement S. Edwards, American consul. Received April 28, 1927.

Valencia. A variety of Spanish onion.

73715. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Russia. Seeds presented by J. W. Pincus, Amtorg Trading Corporation, New York City. Received April 29, 1927.

Orloff. A Russian variety.

73716. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Manila, Philippine Islands. Seeds presented by S. Youngberg, director, Bureau of Agriculture. Received April 26, 1927.

Locally grown seeds.

73717 to 73734.

From Manchuria. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry, through D. McLorn, postal commissioner, Harbin. Received April 27, 1927.

Manchurian-grown seeds.

73717 to 73725. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

73717. No. 9103.
73718. No. 9107.
73719. No. 9109.
73720. No. 9115.
73721. No. 9120.
73722. No. 9124.
73723. No. 9128.
73724. No. 9132.
73725. No. 9137.

73726 and 73727. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

73726. No. 9110.
73727. No. 9138.

73728 to 73734. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

73728. No. 9104.
73729. No. 9113.
73730. No. 9117.
73731. No. 9121.
73732. No. 9125.
73733. No. 9129.
73734. No. 9130

73735 and 73736.

From Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 21, 1927.

73735. BAUHINIA ACUMINATA L. Caesalpiniaceae. **Snowy bauhinia.**

Botanic Garden, Victoria, Cameroon. An ornamental tropical upright bush 6 feet or less high, with oval leaflets which close at night and white flowers 2 to 3 inches in diameter. Native to West Africa and suitable for greenhouse culture or for growing outside in summer.

For previous introduction see No. 66863.

73736. LAGERSTROEMIA SPECIOSA (Muenchh.) Pers. (*L. flos-reginae* Retz.). Lythraceae. **Crape myrtle.**

Experiment station, Cape St. Mary, Bathurst, Gambia. An ornamental tropical shrub or tree up to 50 feet high, with panicles of large pink or purple flowers. Native to West Africa.

73737. DEGUELIA sp. Fabaceae.

From Inhambane, Mozambique, Africa. Seeds presented by Rev. Pliny W. Keys, Methodist Episcopal Mission. Received April 28, 1927.

A tropical African leguminous tree, parts of which (possibly the leaves and stems) are used by the natives to poison water and kill fish.

73738 to 73797.

From Manchuria. Seeds obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received April, 1927.

Manchurian-grown seeds.

Numbers 73738 to 73749 were received through D. McLorn, postal commissioner, Harbin.

73738 and 73739. AVENA SATIVA L. Poaceae. **Oats.**

73738. No. 9182.
73739. No. 9186.

73740 to 73749. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

73740. No. 9141.
73741. No. 9145.
73742. No. 9149.
73743. No. 9155.
73744. No. 9162.
73745. No. 9164.
73746. No. 9168.
73747. No. 9172.
73748. No. 9176.
73749. No. 9190.

73750 to 73756. ORYZA SATIVA L. Poaceae. **Rice.**

73750. No. 9094. *Hokkaido No. 1.* Unplowed land, first year.

73751. No. 9095. *Hokkaido No. 2.* From the region of Hailar. Plowed land, second year.

73752. No. 9096. *Hokkaido No. 3.* From the region of Hailar. Plowed land, third year.

73753. No. 9097. *Hokkaido No. 4.* From land that has been plowed many times.

73754. No. 9098. *Bolgarsky No. 5.* A variety which quickly changes its type.

73755. No. 9099. *Kooantorie No. 6.* A hairless rice which gives good crops.

73756. No. 9116. From Chushanchen, Kirin Province, obtained through D. McLorn, postal commissioner, Harbin.

Numbers 73757 to 73797 are locally grown seeds obtained through D. McLorn, postal commissioner, Harbin.

73757 to 73769. PHASEOLUS spp. Fabaceae.

73757 to 73767. PHASEOLUS AUREUS Roxb. **Mung bean.**

73757. No. 9142.
73758. No. 9146.
73759. No. 9150.
73760. No. 9156.
73761. No. 9159.
73762. No. 9165.
73763. No. 9169.
73764. No. 9173.
73765. No. 9177.
73766. No. 9183.
73767. No. 9187.

73768 and 73769. PHASEOLUS VULGARIS L. **Common bean.**

73768. No. 9166.
73769. No. 9188.

73770 to 73783. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soy bean.**

73770. No. 9100.
73771. No. 9139.
73772. No. 9143.
73773. No. 9147.
73774. No. 9151.
73775. No. 9153.
73776. No. 9157.
73777. No. 9160.
73778. No. 9167.
73779. No. 9170.
73780. No. 9174.
73781. No. 9178.
73782. No. 9180.
73783. No. 9184.

73784 to 73793. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

73784. No. 9140.
73785. No. 9144.
73786. No. 9148.
73787. No. 9152.
73788. No. 9154.
73789. No. 9158.
73790. No. 9161.
73791. No. 9163.
73792. No. 9172.
73793. No. 9175.

73794. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 9179.

73795 to 73797. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

73795. No. 9181.
73796. No. 9185.
73797. No. 9189.

73798. CHAYOTA EDULIS Jacq. (*Sechium edule* Swartz). Cucurbitaceae. **Chayote.**

From Moca, Dominican Republic. Fruits presented by Dr. R. Ciferri, director, Estación Nacional Agronómica y Colegio de Agricultura. Received May 3, 1927.

A local variety.

73799. LARIX SIBIRICA Ledeb. Pinaceae. **Siberian larch.**

From Indian Head, Saskatchewan, Canada. Seeds presented by Norman M. Ross, forestry branch, Department of the Interior. Received April 30, 1927.

A tall, very hard, deciduous coniferous tree, up to 40 meters high. It has a straight trunk and short branches. Native to Siberia.

For previous introduction see No. 58392.

73800. STURTIA GOSSYPIOIDES R. Br. Malvaceae.

From Sydney, New South Wales, Australia. Seeds presented by G. P. Darnell-Smith, director, botanic gardens. Received May 9, 1927.

An Australian shrub, several feet in height, with broadly oval leathery leaves about 2 inches long, and large purple flowers with darker centers. It is closely related to cotton (*Gossypium* spp.).

73801 to 73807. FRAGARIA spp. Rosaceae. **Strawberry.**

From Kingsley, Borden, Hants, England. Plants presented by C. Howard Jones, Kingsley Fruit Farm and Nursery. Received May 6, 1927.

European varieties not carried in the American trade.

73801. FRAGARIA sp.

Kentish Favourite.

73802. FRAGARIA sp.

King George.

73803. FRAGARIA sp.

Madame Kooi.

73804. FRAGARIA sp.

Reliance.

73805. FRAGARIA sp.

Royal Sovereign.

73806. FRAGARIA sp.

Sir Joseph Paxton.

73807. FRAGARIA sp.

The Duke.

73808. SOLANUM MACRANTHUM Dunal. Solanaceae.

From Washington, D. C. Seeds obtained from C. B. Doyle, Bureau of Plant Industry. Received February 7, 1927. Numbered April, 1927.

An ornamental Brazilian tree, about 12 feet high, with large prickly veined leaves and axillary racemes of pale-lilac flowers.

For previous introduction see No. 43665.

73809. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Vicosa, Minas Geraes, Brazil. Seeds presented by P. H. Rolfs, Escola Superior de Agricultura e Veterinaria. Received April 27, 1927.

A local variety which grows to a height of 3 meters.

73810 to 73818. ORYZA SATIVA L. Poaceae. **Rice.**

From Tashkent, Turkestan. Seeds presented by Hilaria Rajkova, botanic garden, Central Asiatic State University, through C. E. Chambliss, Bureau of Plant Industry. Received May 3, 1927.

Locally grown varieties.

73810. C. I. No. 6256. *Kyrmycy.*

73811. C. I. No. 6257. *Arpa.*

73812. C. I. No. 6258.

73813. C. I. No. 6259. *Dungan.*

73814. C. I. No. 6260. *American.*

73815. C. I. No. 6261.

73816. C. I. No. 6262. *Kora.*

73817. C. I. No. 6263. *Kizyl.*

73818. C. I. No. 6264. *County Ashmot.*

73819 to 73822.

From Soledad, Cienfuegos, Cuba. Seeds presented by Robert M. Grey, superintendent, Harvard Botanic Station. Received April 26, 1927.

73819. CALYCOPHYLLUM CANDIDISSIMUM DC. Rubiaceae. **Degame.**

This Central American timber tree, known commercially as the degame, is described by S. J. Record (Timbers of Tropical America, p. 547) as being 40 to 65 feet high with a straight trunk free from limbs. The wood has the strength, toughness, and resilience of hickory and is used for making agricultural implements, tool handles, and similar articles.

For previous introduction see No. 66769.

73820. MONTEZUMA sp. Bombacaceae.

A small ornamental tree with pale-pink flowers, native to Cuba.

73821. POSOQUERIA MULTIFLORA Lem. Rubiaceae.

A small tropical Brazilian tree with terminal clusters of large erect fragrant white flowers.

73822. TILMIA CARYOTAEFOLIA O. F. Cook. (*Martinezia caryotaefolia* H. B. K.). Phoenicaceae. **Palm.**

A small graceful palm, becoming 30 feet high, which is native to tropical South America. The erect stem is slightly swollen at the base and is clearly ringed; these rings are armed with stiff black slender spines 2 or 3 inches long. The bright-green terminal pinnate fronds are 4 to 5 feet long, spreading and drooping.

For previous introduction see No. 51739.

73823. BUTIA CAPITATA Beccari (*Cocos capitata* Mart.). Phoenicaceae. **Palm.**

From St. Leo, Fla. Seeds presented by Father Jerome, St. Leo Academy, through R. A. Young, Bureau of Plant Industry. Received April 29, 1927.

A large coconutlike palm, of ornamental appearance, with a spineless trunk, pinnate leaves, and large bunches of fruit, which is said to be hardier than any other species of cocos.

For previous introduction see No. 45009.

73824. CITRUS sp. Rutaceae.

From Soledad, Cienfuegos, Cuba. Cuttings presented by Robert M. Grey, superintendent, Harvard Botanic Station. Received May 9, 1927.

Orange seedling.

73825 to 73862.

From Africa, Balearic Islands, Spain, and Portugal. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April, 1927.

73825. AMOMUM sp. Zinziberaceae.

No. 1210. Buea, Cameroon, West Africa, February 12, 1927. An ornamental gingerlike plant with large leaves and purple flowers. Native to tropical Africa.

73823 to 73829. AMYGDALUS COMMUNIS L. Amygdalaceae. **Almond.**

Iviza, Balearic Islands, August, 1925. Locally grown varieties.

73826. *Pau.* **73828.** *Fitas.*

73827. *Duro.* **73829.** *Mollar.*

73830. ANNONA CHERIMOLA Mill. Annonaceae. **Cherimoya.**

From Malaga, Spain.

73831. ASPARAGUS sp. Convallariaceae.

Near Agadiz, Morocco. Locally grown seeds.

73832. BAUHINIA sp. Caesalpiniaceae.

No. 1236. Assuausi, Gold Coast, West Africa, March 1, 1927. A small ornamental tropical bush with yellowish white flowers.

73833. BELIS LANCEOLATA (Lamb.) Sweet (*Cunninghamia sinensis* R. Br.). Pinaceae. **Chinese fir.**

No. 1303. Bussaco, Portugal, April 7, 1927. A hardy evergreen Chinese tree which sprouts readily from the base. It has very attractive, dark-green foliage.

For previous introduction see No. 44665.

73834. CALLITRIS CUPRESSIFORMIS Vent. Pinaceae.

No. 1313. Bussaco, Portugal, April 7, 1927. A handsome subtropical cypresslike tree which is native to Australia.

For previous introduction see No. 51754.

73835. CALONCOBA BREVIPES (Stapf) Gilg (*Oncoba brevipes* Stapf). Flacourtiaceae.

No. 1223. Assuausi, Gold Coast, West Africa, March 1, 1927. An attractive tropical tree 20 feet high, which bears fragrant pure-white flowers, 3 inches in diameter, during the winter when the tree is leafless. The fruits are yellow and the size of a lime.

73836. CAPSICUM ANNUUM L. Solanaceae. **Red pepper.**

No. 1285. Obtained in the market at Akkra, Gold Coast, West Africa, February 26, 1927. A tropical African variety with very small yellow fruits the shape of the large bullnose pepper.

73837. CARICA QUERCIFOLIA (St. Hil.) Benth. and Hook. Papayaceae.

No. 1312. Coimbra, Portugal, April 8, 1927. A low, rapid-growing tree with small yellow fruits, which is a South American relative of the papaya.

For previous introduction see No. 48661.

73838. CASUARINA CUNNINGHAMIANA Miquel. Casuarinaceae.

No. 1306. Bussaco, Portugal, April 7, 1927. A slender-branched, leafless Australian ornamental tree, the so-called "beefwood," which has branchlets suggesting horsetails.

For previous introduction see No. 49720.

73825 to 73862—Continued.

73839. CATALPA sp. Bignoniaceae.

No. 1319. Lisbon, Portugal, April 5, 1927. A small ornamental catalpa with large leaves and flowers.

73840. CEIBA PENTANDRA (L.) Gaertn. (*Eriodendron anfractuosum* DC.). Bombacaceae. **Kapok.**

No. 1283. Bufuedru, en route to Assuausi, Gold Coast, West Africa, February 28, 1927. A local type producing an abundance of pods.

For previous introduction see No. 50746.

73841. CHRYSOPHYLLUM AFRICANUM A. DC. Sapotaceae.

No. 1237. Experiment station, Aburi, Gold Coast, February 26, 1927. A tree 60 feet high, related to the star apple. The golden-yellow fruits, 2 inches in diameter, have a sticky guttalike gum in the thick rind, and the pulp contains a rather small amount of acid. This may have value as a stock for the star apple.

73842. CLITORIA TERNATEA L. Fabaceae.

No. 1234. Agricultural experiment station, Assuausi, Gold Coast, March 1, 1927. A white-flowered variety of a tropical leguminous annual vine. This white variety seems to have larger flowers than the blue variety.

For previous introduction see No. 53988.

73843. CUCURBITA sp. Cucurbitaceae.

No. 1253. Obtained in the market at Akkra and said to have come originally from Lagos, Nigeria. March 27, 1927. A plant called *agushi* by the natives.

73844. CUPRESSUS LUSITANICA Mill. Pinaceae. **Portuguese cypress.**

No. 1300. Bussaco, Portugal, April 7, 1927. An ornamental evergreen Mexican tree which is cultivated as a forest tree in northern Portugal. Its soft aromatic straight-grained wood is considered valuable.

73845. CYPERUS ESCULENTUS L. Cyperaceae. **Chufa.**

No. 1254. Obtained in the market at Akkra, Gold Coast, February 27, 1927. A tropical African variety with large tubers which contain oil.

For previous introduction see No. 52899.

73846. DIALIUM GUINEENSE Willd. Caesalpiniaceae. **Velvet tamarind.**

No. 1240. Obtained in the market at Akkra, Gold Coast, February 27, 1927. A tropical leguminous tree with small black edible pods which, when ripe, contain a dry sweetish acid pulp with the flavor of a tamarind and are used as pickles. This variety is best suited to regions with light rainfall, though it does occur where the rainfall is heavier. The wood is strong and excellent for carpentry.

For previous introduction see No. 67313.

73847. DIOSCOREA sp. Dioscoreaceae. **Yam.**

No. 1298. Abuko, near Bathurst, Gambia, January, 1927. A fast-growing tropical vine which may be of ornamental value. The tubers are perhaps edible.

73848. DIOSPYROS EBENUM Koen. Diospyraceae. **Ebony.**

No. 1249. Botanic garden, Victoria, Cameroon, February 15, 1927. An evergreen tropical tree up to 50 feet high, which may be of use as a stock for *Diospyros kaki* in Florida. The fruits are round, about an inch in diameter, and contain five or six seeds surrounded by a rather thin pulp.

73825 to 73862—Continued.

73849. ERYTHRINA CRISTA-GALLI L. Fabaceae.

No. 1301. Bussaco, Portugal, April 7, 1927. An ornamental shrub or small tree with dark-red flowers in large clusters a foot long. Native to southern South America.

73850. ERYTHRINA SENEGALENSIS DC. Fabaceae.

No. 942. Bathurst, Gambia, January 4, 1927. A small ornamental tree 8 to 16 feet high, with thorny branches and large crimson flower clusters 6 to 9 inches long. The pods are constricted, and each segment contains a brilliant red seed.

73851. FIRMIANA BARTERI (Masters) Schum. (*Sterculia barteri* Masters). Sterculiaceae.

No. 1239. Akkra, Gold Coast, February 27, 1927. A handsome tropical forest tree with coral-pink flowers.

73852 to 73854. GOSSYPIUM spp. Malvaceae. **Cotton.**

73852. GOSSYPIUM HIRSUTUM L.

No. 1221. Assuausi, Gold Coast, March 1, 1927. "Black rattler" cotton.

73853. GOSSYPIUM sp.

No. 1229. Winneba, Gold Coast, February 28, 1927. A tall plant which probably has escaped from cultivation.

73854. GOSSYPIUM sp.

Lisbon, Portugal. [No other notes.]

73855. HAKEA ACICULARIS (Vent.) Knight. Proteaceae.

No. 1311. Bussaco National Forest, Portugal, April 7, 1927. A tall evergreen shrub or small bushy tree, native to Australia, with very handsome foliage which is rigid and spiny, thus serving to protect the plant against animals. The plant is suitable for hedges and shrubberies and requires but little moisture or cultivation.

For previous introduction see No. 56879.

73856. HOMALIUM DOLICHOPHYLLUM Gilg. Flacourtiaceae.

No. 1258. Village of Bufuedru, en route from Winneba to Swedru, Gold Coast, February 27, 1927. A tropical ornamental tree with large racemes of pink flowers which turn to deep brown as the winged seeds mature.

73857. LAUROCERASUS OFFICINALIS Roemer (*Prunus laurocerasus* L.). Amygdalaceae. **English cherry laurel.**

No. 1308. Bussaco National Forest, Portugal, April 7, 1927. A very free-flowering, low-spreading evergreen shrub with narrow, flat foliage. It is perhaps more hardy than the common type.

For previous introduction see No. 67802.

73858 and 73859. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

73858. No. 1314. Malaga, Spain, March 30, 1927. A Spanish variety with small, deep-red fruits which keep well.

73859. From Malaga, Spain. [No other data.]

73860. MICHELIA CHAMPACA L. Magnoliaceae.

No. 1230. Agricultural experiment station, Aburi, Gold Coast, West Africa, February 27, 1927. An ornamental tropical tree with fragrant cream-colored flowers which is used as an avenue tree in this region.

For previous introduction see No. 67416.

73825 to 73862—Continued.

73861. MORINDA CONFUSA Hutchins. Rubiaceae.

No. 1233. En route from Winneba to Assuausi, Gold Coast, West Africa, February 26, 1927. A woody tropical climber with fragrant white flowers and large orange fruits. The roots are used as a remedy for fever.

73862. PHASEOLUS LUNATUS L. Fabaceae. **Lima bean.**

No. 1228. These seeds were obtained in the market at Secundee, Gold Coast, West Africa, and perhaps were originally grown in the interior of Africa.

73863. OXYTENANTHERA ABYSSINICA (A. Rich.) Munro. Poaceae. **Bamboo.**

From Africa. Seeds obtained from the department of agriculture, Southern Rhodesia, through the Federal Horticultural Board, United States Department of Agriculture. Received September 16, 1926. Numbered in April, 1927.

A large bamboo 25 to 50 feet high and 1½ to 3 inches in diameter, reported to have a wide range in Africa. It has a very different appearance from the remainder of the genus, but the structure of the spiculae in all the species is very similar.

For previous introduction see No. 42835.

73864 to 73880.

From Africa and Portugal. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April, 1927.

73864. PTEROCARYA STENOPTERA DC. Juglandaceae. **Chinese wing nut.**

No. 1309. Bussaco National Forest, Portugal. A handsome shade tree up to 60 feet high with leaves 6 to 12 inches long.

For previous introduction see No. 61938.

73865. SORGHUM sp. Poaceae. **Grass.**

No. 1222. En route from Winneba to Assuausi, Gold Coast, West Africa, February 28, 1927. A tropical grass 7 feet high with reddish leaves, resembling Sudan grass.

73866. STROPHANTHUS SARMENTOSUS DC. Apocynaceae.

No. 1271. Fouta Jalon Mountains, French Guinea, March 10, 1927. An ornamental tropical woody climber with white and purple flowers. The seeds contain a poisonous alkaloid which is used as a heart stimulant.

73867. TRISTANIA CONFERTA R. Br. Myrtaceae. **Brisbane box.**

No. 1307. Bussaco, Portugal, April 7, 1927. An attractive evergreen drought-resistant tree with white flowers, which will probably be hardy only in the southern United States.

For previous introduction see No. 43783.

73868 and 73869. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

73868. No. 1255. Obtained in the market at Akkra, Gold Coast, February 27, 1927. The Aiye bean from Togoland.

73869. No. 1256. Obtained in the market at Akkra, Gold Coast, February 27, 1927.

73870 to 73874. ZEA MAYS L. Poaceae. **Corn.**

73870. No. 1188. A white flint variety obtained in the market at Tico, Cameroon, and originally from Mbassi, February 16, 1927.

73864 to 73880—Continued.

73871. No. 1189. A pinkish variety of dent corn obtained in the market at Tico, Cameroon, and originally from Mbassi, February 12, 1927.

73872. No. 1238. Obtained in the market at Secundee, Gold Coast, March 2, 1927.

73873. No. 1250. A white flint variety obtained in the market at Asebu, near Assuausi, Gold Coast.

73874. No. 1257. Obtained in the market at Tico, Cameroon, February 15, 1927. The native name is *mbassi*, which is also the name of a village. The long husk covering the ear may indicate a protection against the corn worm which is generally bad in tropical regions.

73875. (Undetermined.)

No. 1226. Akkra, en route to Assuausi, Gold Coast, February 27, 1927. A large-leaved tropical herbaceous plant.

73876. ERIOSEMA GLOMERATA (Guill. and Perr.) Hook. f. Fabaceae.

Nos. 1247 and 1248. En route from Buea to Moyuca, Cameroon, February 15, 1927. A tropical leguminous plant growing along the roadside. It is very leafy and may be a good cover crop.

73877. (Undetermined.)

No. 1251. March 15, 1927. A tropical forest tree used as a shade tree in the cacao plantations near Victoria, Cameroon.

73878. (Undetermined.)

No. 1273. En route from Mamou to Dalaba, Fouta Jalon, French Guinea, March 10, 1927. A tropical vine the latex of which is very sticky and may contain rubber.

73879. PACHIRA FASTUOSA (DC.) Decaisne. Bombacaceae.

No. 1287. Konakry, French Guinea, March 10, 1927. *Noix de Cayenne.* A tropical woody plant with pods the size and shape of small cacao pods, containing edible nuts which are the size of hazelnuts and have the flavor of raw peanuts.

For previous introduction see No. 63779.

73880. (Undetermined.)

No. 1292. Near Mamou, Fouta Jalon, French Guinea, March 10, 1927. A tropical cucurbitaceous vine with bright-red oval fruits which are half an inch long.

73881. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Makino (*P. sargenti* Rehder). Amygdalaceae. Sargent's cherry.

From Kagoshima, Japan. Seeds presented by Dr. K. Temari, director, Kagoshima Imperial College of Agriculture and Forestry. Received April 18, 1927.

A tall handsome tree, native to northern Japan, up to 25 meters in height, with smooth, dark-brown bark and ovate or ovate-lanceolate sharply serrate leaves 6 to 12 centimeters long. The single pink flowers, 2.5 to 4 centimeters wide are in few-flowered clusters, and the black fruits are about the size of peas. This wild Japanese cherry is considered by E. H. Wilson (Arnold Arboretum, Jamaica Plain, Mass.) to be the parent of several of the finest double-flowering varieties of flowering cherries and also to be the most satisfactory stock on which to work these varieties.

73882 to 73899.

From Tiehlingho P. O., Kirin Province, Manchuria. Seeds presented by A. D. Woeikoff, director, experiment farm, Echo. Received May 25, 1927.

73882 to 73898. AVENA SATIVA L. Poaceae. Oats.

Locally developed varieties.

73882. No. 344–288.	73891. No. 377–2234.
73883. No. 345–2229.	73892. No. 379–2236.
73884. No. 346–2230.	73893. No. 383–708.
73885. No. 353–2233.	73894. No. 384–222.
73886. No. 355–744.	73895. No. 388–2231.
73887. No. 356–745.	73896. No. 389–2232.
73888. No. 362–2238.	73897. No. 399–746.
73889. No. 369–2239.	73898. No. 403–2240.
73890. No. 375–226.	

73899. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soy bean.

No. 698. A locally grown variety.

73900 to 73905. PHLEUM PRATENSE L. Poaceae. Timothy.

From Svalof, Sweden. Seeds presented by Dr. G. Nilsson-Leissner, assistant, forage-crop department. Received May 26, 1927.

Local selections of timothy.

73900. No. 21–21.	73903. No. 49–23.
73901. No. 42–22.	73904. No. 818.
73902. No. 48–23.	73905. *Gloria.*

73906. SACCHARUM OFFICINARUM L. Poaceae. Sugar cane.

From Soledad, Cienfuegos, Cuba. Cuttings presented by Robert M. Grey, superintendent, Harvard Botanic Station, through E. W. Brandes, Bureau of Plant Industry. Received June 2, 1927.

A locally grown variety.

73907 to 73910.

From Leningrad, Russia. Seeds presented by B. L. Issatchenko, director, botanic garden. Received May 20, 1927.

73907. CARAGANA FRUTEX (L.) Koch. Fabaceae. Russian pea shrub.

A hardy ornamental shrub 6 to 10 feet high, native from southeastern Russia to western China. The solitary yellow flowers are about an inch long.

For previous introduction see No. 52695.

73908 to 73910. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

Russian varieties.

73908. No. 1.	73910. No. 3.
73909. No. 2.	

73911 and 73912.

From Victoriaborg, Akkra, Gold Coast, Africa. Seeds presented by L. A. King-Church, conservator of forests. Received May 28, 1927.

73911. FIRMIANA BARTERI (Masters) Schum. (*Sterculia barteri* Masters). Sterculiaceae.

A tropical African tree, about 35 feet high, with reddish yellow bark, rounded cordate leaves, and loose panicles of small scarlet flowers.

73911 and 73912—Continued.

73912. PARKIA sp. Mimosaceae.

A tropical African ornamental tree, said to have white flowers.

73913 and 73914.

From Matania el Saff, Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station. Received May 31, 1927.

73913. ACACIA SCORPIOIDES (L.) W. F. Wight (*A. arabica* Willd.). Mimosaceae.

A tropical African leguminous tree of variable size, with bipinnate foliage and heads of small white flowers. The pods are used in tanning.

73914. CASUARINA FRASERIANA Miquel. Casuarinaceae.

A tall erect shrub or small tree closely related to *Casuarina distyla*, with leafless rigid branches and with the leaves represented by very small scales in whorls. Native to Australia.

73915 and 73916.

From Tashkent, Turkestan. Seeds presented by Hilaria Rajkova, botanic garden. Received June 2, 1927.

73915. EXOCHORDA KOROLKOWI Lavall. Rosaceae. **Turkestan pearlbush.**

A hardy upright slender-stemmed shrub up to 4 meters high, with racemes of white flowers 4 centimeters in diameter. Native to central Asia.

73916. THERMOPSIS ALTERNIFOLIA Regel and Schmalh. Fabaceae.

A hardy herbaceous yellow-flowered perennial, native to central Asia.

73917 to 73920. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, director, Estación Nacional Agronómica y Colegio de Agricultura. Received June 2, 1927.

Local varieties.

73917. *Todo el ano.* A small-seeded variety.

73918. No. 3.

73919. No. 2.

73920. No. 1.

73921 and 73922.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May 16, 1927.

73921. BALANITES AEGYPTIACA (L.) Delile. Zygophyllaceae.

No. 1288. Obtained in the market at Dakar, Senegal, March 17, 1927. The *morotodi* of the Foulani people, which is sometimes called the "desert date." A handsome tropical evergreen shrub with fragrant flowers and fruits which resemble the "dry" date as it is sold on the market. The wood is very hard and is used for plowhandles. The bark is used for fish poison, the seeds for the oil contained in them, and the leaves are used as a vegetable.

For previous introduction see No. 50121.

73922. BAUHINIA TOMENTOSA L. Caesalpiniaceae. **St. Thomas tree.**

No. 1286. Agricultural experiment station Aburi, Gold Coast, March 26, 1927. An erect tropical shrub with pale-yellow flowers.

For previous introduction see No. 66150.

73923. BUTIA ERIOSPATHA (Mart.) Beccari (*Cocos eriospatha* Mart.). Phoenicaceae.

From Soledad, Cienfuegos, Cuba. Seeds presented by Robert M. Grey, superintendent, Harvard Botanic Station. Received May 19, 1927.

A handsome pinnate-leaved palm with violet-colored stems, creamy flowers, and edible yellow fruits the size of a small plum. Native to Brazil.

For previous introduction see No. 45045.

73924 to 73942.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May 16, 1927.

73924. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

No. 1274. Folota, near Kanakry, French Guinea, March 10, 1927.

73925. CAPSICUM ANNUUM L. Solanaceae. **Red pepper.**

No. 1284. February 27, 1927. A yellow variety obtained in the market at Akuse, near Akkra, Gold Coast.

73926 and 73927. CARICA PAPAYA L. Papayaceae. **Papaya.**

73926. No. 1280. Botanic garden, Victoria, Cameroon, February 17, 1927. A variety with deep-salmon flesh of excellent quality.

73927. No. 1281. Konakry, French Guinea, March 12, 1927. A selected strain, said to be excellent.

73928. CASSIA SIEBERIANA DC. Caesalpiniaceae.

No. 1259. Dalaba, Fouta Jalon, French Guinea, March 10, 1927. A handsome tropical tree with long racemes of large yellow flowers.

73929. CLEMATIS GRANDIFLORA DC. Ranunculaceae.

No. 1264. Mamou, Fouta Jalon, French Guinea, March 10, 1927. A delicate climbing ornamental shrub with large greenish white flowers which produce balls of seeds 2 or 3 inches in diameter.

73930. COMBRETUM sp. Combretaceae.

No. 1263. Mamou, Fouta Jalon, French Guinea, March 10, 1927. A large handsome tropical shrub.

73931. COMBRETUM sp. Combretaceae.

No. 1269. Dalaba, Fouta Jalon, French Guinea, March 10, 1927. An ornamental tropical woody climber producing long arching shoots covered with masses of deep-scarlet flowers which are arranged in cushionlike clusters.

73932. CROTALARIA RETUSA L. Fabaceae.

No. 1290. Near Dakar, Senegal, March 17, 1927. A yellow-flowered tropical annual legume.

For previous introduction see No. 64061.

73933. ELAEIS GUINEENSIS Jacq. Phoenicaceae. **African oil palm.**

Seeds from the Gold Coast.

73934. ERYTHROPHLOEUM GUINEENSE Don. Caesalpiniaceae.

No. 1279. Near Mamou, Fouta Jalon, French Guinea, March 10, 1927. The "ordeal tree," so called because an infusion of the poisonous bark is used in many parts of Africa as an ordeal to test the guilt of a suspected person. It is also used as an arrow poison. This is a large handsome tropical tree up to 50 feet high, and the wood is very hard and durable.

For previous introduction see No. 48457.

73924 to 73942—Continued.

73935. FICUS CAPENSIS Thunb. Moraceae.

No. 1262. Near Mamou, en route to Dalaba, Fouta Jalon, French Guinea, March 10, 1927. A small tropical tree with smooth, juicy fruits 1½ inches in diameter, which are eaten with milk by the natives of French Guinea. It may prove valuable as stock for the cultivated fig.

For previous introduction see No. 56533.

73936. INDIGOFERA sp. Fabaceae.

No. 1275. En route from Mamou to Dalaba, Fouta Jalon, French Guinea, March 10, 1927. A tall upright herbaceous tropical plant 8 feet high, which produces small brown pods containing five or six seeds. It is probably a perennial, and may be a good cover plant.

73937. MEMECYLON SPATHANDRA Blume. Melastomaceae.

No. 1270. Near Mamou, Fouta Jalon, French Guinea, March 10, 1927. A tall ornamental tropical shrub, up to 25 feet high, with large green leaves and deep-blue flowers.

73938. PAHUDIA AFRICANA (Smith) Prain (*Afzelia africana* Smith). Caesalpiniaceae.

No. 1272. En route to Dalaba, Fouta Jalon, French Guinea, March 10, 1927. A handsome tropical shade tree producing large ornamental pods 6 inches long, which contain dull-black seeds with scarlet arils. These seeds are very attractive and are used by the natives for beads.

For previous introduction see No. 47501.

73939. PARINARI BENNA S. Elliot. Rosaceae.

No. 1282. Fouta Jalon, French Guinea, March 10, 1927. A shapely tropical tree called *sigon* by the natives of this region. The fruits are used medicinally by the natives, especially as a vermifuge.

73940. TETRAPLEURA TETRAPTERA (Schum.) Taub. Mimosaceae.

No. 1276. Obtained in the market at Akkra, Gold Coast, March 9, 1927. A tall, unarmed tree which has alternate compound leaves with leathery leaflets and small flowers in spikelike clusters. The pods are roasted and ground to make black soup, a common native dish in parts of tropical Africa. The soft pulp of these pods contains sugar, tannin, and a small quantity of saponin. The presence of saponin enables the natives to use the pods for washing purposes also.

For previous introduction see No. 62918.

73941. UVARIA CHAMAE Beauv. Annonaceae.

No. 1265. Near Mamou, Fouta Jalon, French Guinea, March 10, 1927. A small tropical drought-resistant tree with shiny fragrant leaves and large greenish brown flowers, followed by clusters of small tomentose fruits, filled with seeds, which are edible but insipid. The roots are used medicinally, and the wood is made into oars. This species may be valuable in the breeding of hardier Annonas.

73942. ZEA MAYS L. Poaceae. **Corn.**

No. 1278. Mamou, Fouta Jalon, French Guinea, March 10, 1927. The brown color is caused by the smoke in drying.

73943 to 73950.

From Moscow, Russia. Seeds presented by the secretary, Institute of Applied Botany and New Cultures. Received May 11, 1927.

73943. ALLIUM BARSCZEWSKII Lipsky. Liliaceae.

A hardy bulbous plant which may be of ornamental value. Native to western Russia.

73943 to 73950—Continued.

73944. ASTRAGALUS BORROVIANUS Hort. Fabaceae.

A hardy leguminous herbaceous plant native to Russia.

73945. CALAMAGROSTIS sp. Poaceae. **Grass.**

A rather tall hardy perennial grass, native to Russia.

73946. CONVALLARIA MAJALIS L. Convallariaceae. **Lily of the valley.**

Variety *Mandschurica*. A Manchurian form of the lily of the valley.

73947 to 73950. PAPAVER SOMNIFERUM L. Papaveraceae. **Poppy.**

Decorative Mongolian varieties.

73947. A double salmon variety.

73948. A double white variety.

73949. A double crimson variety.

73950. A double white variety with rosy margins.

73951. MUSANGA SMITHII R. Br. Moraceae.

From Cameroon, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received June 1, 1927.

No. 1213. En route to the Ekona estate, March 18, 1927. The corkwood tree of West Africa, so called because of the lightness of the wood, which is used for building purposes. It is a handsome tropical tree, related to the mulberry, and becomes 60 to 80 feet in height, with palmate leaves having drooping lobes.

73952. PERSEA sp. Lauraceae. **Aguacate.**

From Venezuela. Seeds presented by H. Pittier, Museo Comercial, Ministerio de Relaciones Exteriores, Caracas. Received May 23, 1927.

A small-fruited wild avocado from the Tuy Valley, State of Miranda. The fruits have a delicate flavor.

73953. OPHIOPOGON JAPONICUS Ker. Liliaceae. **Japanese snake's-beard.**

From Peradeniya, Ceylon. Roots presented by T. H. Parsons, curator, Royal Botanic Gardens. Received May 20, 1927.

A tropical grasslike ornamental with variegated foliage, native to tropical Asia.

For previous introduction see No. 48720.

73954 and 73955.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April, 1927.

73954. FIRMIANA BARTERI (Masters) Schum. Sterculiaceae.

No. 1239. Akkra, Gold Coast, February 27, 1927. A tropical ornamental tree with coral-pink flowers. The wood is light and used for fish-net floats, and the fiber is used for making rope.

73955. PICRALIMA KLAINEANA Pierre. Apocynaceae.

No. 1252. Agricultural experiment station, Aburi, Gold Coast, February 26, 1927. An ornamental tropical tree with attractive foliage and large bitter fruits used as a substitute for quinine.

73956. ELAEIS GUINEENSIS Jacq. Phoenicaceae. **African oil palm.**

From Cameroon, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March 25, 1927. Numbered April, 1927.

No. 1192. Botanic garden, Victoria, February 17, 1927. Variety *Poissonii*. A form of the African oil palm with flowers having a so-called "fleshy perianth" (probably abortive fruits) which contain 69 per cent of oil. The common type has a papery perianth. The native name is *diwakkawakka*.

73957 to 73962.

From Yokohama, Japan. Plants purchased from the Yokohama Nursery Co. Received February 24, 1927. Numbered April, 1927.

A collection of bamboos to be grown for identification.

73957. ARUNDINARIA FASTUOSA (Marl.) Makino. Poaceae. **Bamboo.**

73958. BAMBUSA NANA Roxb. Poaceae. **Bamboo.**

73959. BAMBUSA ALPHONSO KARRI Hort. Poaceae. **Bamboo.**

73960. PHYLLOSTACHYS PUBERULA NIGRA (Lodd.) H. de LeHaie (*P. nigra* Munro). Poaceae. **Bamboo.**

73961. SASA ARGENTEO-STRIATA (Regel) E. G. Camus. Poaceae. **Bamboo.**

73962. SASA AUREO-STRIATA (Regel) E. G. Camus. Poaceae. **Bamboo.**

73963 to 73967. VITIS VINIFERA L. Vitaceae. **European grape.**

From Baghdad, Iraq. Cuttings presented by J. F. Webster, inspector general, Department of Agriculture. Received March 16, 1927. Numbered April, 1927.

73963. *Baid al haman.*

73964. *Dais al anz.*

73965. *Kishmishi.*

73966. *Saidi.*

73967. *Shadda.*

73968 and 73969.

From Bathurst, Gambia, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received in February, 1927.

73968. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

No. 1128. January 8, 1927. A white-seeded selection from the red-seeded Philippine variety which was introduced from the Philippine Islands several years ago. This white-seeded selection is the biggest yielder in Gambia.

73969. CYMBOPOGON sp. Poaceae. **Grass.**

No. 986. Bigelo Beach, near Cape St. Mary, January, 1927. A scented grass 6 feet high, with fragrant leaves, which may be valuable for the production of a variety of citronella oil.

73970. BAUHINIA sp. Caesalpiniaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received June 1, 1927.

A tropical leguminous ornamental shrub.

73971 to 73977.

From Moscow, Russia. Seeds presented by the secretary, Institute of Applied Botany and New Cultures. Received May 13, 1927.

73971 to 73977—Continued.

73971. ASTRAGALUS VARIEGATUS Franch. Fabaceae.

A hardy herbaceous leguminous perennial. Native to Russia.

73972. CAMPANULA sp. Campanulaceae. **Bellflower.**

A hardy herbaceous perennial with large blue flowers. Native to damp woods in Armenia.

73973. DELPHINIUM FLEXUOSUM Bieb. Ranunculaceae. **Larkspur.**

A hardy perennial larkspur with violet flowers. Native to Armenia.

73974. FRAGARIA sp. Rosaceae. **Strawberry.**

A wild strawberry from the region of the Amur River, eastern Siberia.

73975. HEDYSARUM SEMENOWII Regel and Herd. Fabaceae.

For previous introduction and description see No. 73606.

73976. SPIRAEA sp. Rosaceae.

A hardy ornamental shrub from the region of the Amur River, eastern Siberia.

73977. VICIA ERVILIA (L.) Willd. Fabaceae. **Vetch.**

A hardy annual erect vetch native to the Mediterranean countries.

73978 to 73980.

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, director, Estación Nacional Agronómica y Colegio de Agricultura. Received June, 1927.

73978. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

A local large-seeded variety.

73979 and 73980. RICINUS COMMUNIS L. Euphorbiaceae. **Castor bean.**

73979. A rapid-growing vigorous form from Panama.

73980. Variety *Bailudensis*. A good yielder from Palermo, Italy.

73981 to 73984.

From Nikita, Yalta, Crimea, Russia. Seeds presented by George V. Heintz, manager, library of the Government botanical gardens. Received June 3, 1927.

73981. CELTIS AUSTRALIS L. Ulmaceae. **European hackberry.**

A shade tree, up to 60 feet high, with elmlike foliage and small purple edible fruits.

For previous introduction see No. 52285.

73982. CISTUS TAURICUS J. and C. Presl. Cistaceae.

A hardy purple-flowered shrub about 2 feet high, native to southwestern Europe.

73983. EXOCHORDA KOROLKOWI Lavall. Rosaceae. **Turkestan pearlbush.**

For previous introduction and description see No. 73915.

73984. PISTACIA MUTICA Fisch. and Mey. Anacardiaceae.

A deciduous tree, up to 35 feet high, with pinnate foliage. It is sometimes used as stock for pistache (*Pistacia vera*).

73985 to 73987. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Nairobi, Kenya Colony, Africa. Seeds presented by W. Lyne Watt, assistant agricultural officer, Department of Agriculture. Received June 3, 1927.

Locally grown varieties.

73985. No. 1. 73987. No. 3.

73986. No. 2.

73988 and 73989.

From Paris, France. Seeds presented by Maurice Jeanson. Received June 3, 1927.

73988. CARICA CESTRIFLORA (A. DC.) Solms. Papayaceae.

A small tropical Brazilian tree with 7-lobed leaves and fleshy fruits which may be of value for eating.

73989. RUBUS sp. Rosaceae.

A raspberry said to have large fruits. Originally from Bogota, Colombia.

73990. GOSSYPIUM CERNUUM Todaro. Malvaceae. **Cotton.**

From Nagpur, Central Provinces, India. Seeds presented by W. Youngman, economic botanist to the Government, through T. H. Kearney, Bureau of Plant Industry. Received June 3, 1927.

A variety cultivated in the vicinity of Nagpur.

73991. FUNTUMIA ELASTICA (Preuss) Stapf. Apocynaceae. **Lagos rubber tree.**

From Soledad, Cienfuegos, Cuba. Seeds presented by Robert M. Grey, superintendent, Harvard Botanic Station. Received June 3, 1927.

A large forest tree which is very widely distributed throughout central Africa and is the source of Lagos rubber, which is of excellent quality.

For previous introduction see No. 64541.

73992. ALECTRYON EXCELSUM Gaertn. Sapindaceae. **Tioki.**

From Avondale, Auckland, New Zealand. Seeds presented by H. R. Wright. Received June 6, 1927.

As described by Cheeseman (Manual of New Zealand Flora), this is a handsome evergreen tree, 30 to 60 feet high, native to New Zealand. The bark is almost black, and the young branches, under surfaces of the compound leaves, and inflorescences are covered with a very fine silky pubescence. The shining-black oily seeds are half embedded in a fleshy, scarlet cup-shaped aril. The tough, elastic wood is used for tool handles.

For previous introduction see No. 62250.

73993 to 73998.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, director, botanic gardens. Received June 8, 1927.

73993. CASSIA POPULNEA Hort. Caesalpiniaceae.

A tropical Asiatic leguminous plant. [No other data.]

73994. CASSIA ROTUNDIFOLIA Pers. Caesalpiniaceae.

An annual bushy leguminous plant native to tropical America, with small hairy compound leaves and yellow flowers.

For previous introduction see No. 69150.

73993 to 73998—Continued.

73995. FICUS FULVA Reinw. Moraceae.

A small tropical tree with dense foliage and yellow-red fruits about three-fourths of an inch in diameter. Native to Burma and the East Indies.

For previous introduction see No. 67696.

73996. FICUS PARIETALIS Blume. Moraceae.

An attractive tropical Asiatic tree of good habit, with shining green leaves and golden-yellow fruits three-fourths of an inch in diameter.

For previous introduction see No. 67702.

73997. SACCHARUM SPONTANEUM L. Poaceae. **Grass.**

A coarse tropical grass with silvery panicles. It resembles sugar cane.

For previous introduction see No. 55668.

73998. SCLERIA COCHINCHINENSIS (Lour.) Druce (*S. elata* Thwaites). Cyperaceae.

A large tropical sedge 3 feet high, with panicles 1 foot long.

73999. ANANAS sp. Bromeliaceae. **Wild pineapple.**

From Vicosa, Minas Geraes, Brazil. Seeds presented by Prof. P. H. Rolfs, director, Escola Superior de Agricultura e Veterinaria. Received June 10, 1927.

A species of pineapple which is considered wild and is very abundant here. In general the fruits are cylindrical, about 4 inches in diameter and 6 inches long. (*From note by P. H. Rolfs under No. 56851.*)

74000 to 74010. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by Dr. A. H. Kirby, director, Department of Agriculture. Received June 14, 1927.

74000 to 74007. *Tendekwa.*

74000. No. 1. From Djojiro village, Nera, Mwanza district.

74001. No. 2. From Ikoma village, Nera, Mwanza district.

74002. No. 3. From Bukumbi, Mwanza district.

74003. No. 4. From Urima, Mwanza district.

74004. No. 5. From Bukungukira, Mwanza district.

74005. No. 6. From Seke, Shinyanga district.

74006. No. 7. From Kizumbi, Shinyanga district.

74007. No. 8. From Ibadakuli, Shinyanga district.

74008. No. 9. From Utchunga, Shinyanga district.

74009. No. 10. From the Kola Ndota mission, Shinyanga district.

74010. No. 12. *Tendekwa.* From Biharamulo, Bukoba district.

74011. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. **Pineapple nectarine.**

Plant growing at the United States Plant Introduction Garden, Chico, Calif. Numbered June, 1927.

Row 18, tree 8, new test orchard. Worked on Lovell peach stock, P. I. G. 21343. A very fine yellow-fleshed variety received from James Marlboro, Topfield, Mass.

74012 and 74013. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by Dr. A. H. Kirby, director, Department of Agriculture. Received June 14, 1927.

74012. No. 13. *Ndunge wima.* From Kibata, Kilwa district.

74013. No. 14. *Ndunge miti.* From Kibata, Kilwa district.

74014 to 74017. PYRUS spp. Malaceae. Pear.

From Manchuria. Scions collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 2, 1926. Numbered June, 1927.

74014. PYRUS sp.

No. 4711. Ta Lu Hua Temple, Kuangning, November 7, 1925. *Huang hsiang shui li* (yellow fragrant water pear). Scions of one of the four pears which are said to be the best and most blight resistant of the Chinese pears. The fruits, 2 inches in diameter, are yellow and ripen the middle of August.

74015. PYRUS sp.

No. 4712. Ta Lu Hua Temple, Kuangning, November 7, 1925. *Hsiao hsiang shui li* (fragrant water pear). Scions of one of the four pears which are said to be the best and most blight resistant of the Chinese pears. The light-yellow fruits, 1 inch in diameter, ripen the middle of August.

74016. PYRUS sp.

No. 4716. Ta Lu Hua Temple, Kuangning, November 7, 1925. *Ma li* (mottled pear). Fruits 1½ inches in diameter and 2 inches long are picked when greenish and are stored for six or seven days, finally becoming yellow. They ripen the end of September.

74017. PYRUS sp.

No. 4719. Ta Lu Hua Temple, Kuangning, November 7, 1925. *An li* (peace pear). Scions of a tree with green fruits 3 inches in diameter which ripen in October. The fruits are stored seven or eight months and finally become yellow before they are eaten.

74018. BACCAUREA RACEMOSA (Blume) Muell.-Arg. Euphorbiaceae.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, director, botanic gardens. Received February 11, 1927. Numbered in June, 1927.

A tropical ornamental tree native to Java. The berries may be edible.

74019 to 74022.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received February and March, 1927. Numbered in June, 1927.

74019. ARTOCARPUS FALCATUS Hort. Moraceae.

No. 1186. Botanic Garden, Victoria, Cameroon, February 17, 1927. A large handsome tropical tree with coarse leaves and small yellow fruits, irregular in shape, with pinkish flesh.

74020. BOSQUIEA ANGOLENSIS Ficalho. Moraceae.

No. 1190. Botanic Garden, Victoria, Cameroon, February 17, 1927. A handsome tree 50 feet or less in height, with a loosely pyramidal head and a trunk often free of branches to nearly half its height. The rigid leathery leaves are elliptic and 2 to 6 inches long. The fruits contain a large single fleshy seed which is cooked and said to be of excellent flavor. Native to western tropical Africa.

For previous introduction see No. 62900.

74019 to 74022—Continued.

74021. LANDOLPHIA STOLZII Busse. Apocynaceae.

No. 1178. Between Bouea and Victoria, Cameroon, February 11, 1927. A tropical climbing shrub with small oval glossy green leaves, dense clusters of fragrant white flowers, and fruits resembling small oranges.

For previous introduction see No. 63773.

74022. (Undetermined.)

No. 1112. Jala Experiment Station, Sierra Leone, January 21, 1927. A handsome tropical African tree with golden-yellow figlike fruits which are edible.

74023 to 74111.

From Leningrad, Russia. Seeds presented by A. Kol, chief, bureau of introduction, Institute of Applied Botany. Received in June, 1927.

74023. AVENA BREVIS Roth. Poaceae. Oats.

No. 10184. A selection of a late-maturing sandy variety from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy. The straw makes good feed.

74024 to 74055. AVENA SATIVA L. Poaceae. Oats.

74024. No. 10159. *Ilbiu.* Variety *montana.* A selection of an early prolific variety from the Tulun Experiment Station.

74025. No. 10273. *Severianin.* Variety *mutica.* A long-grained, thin-hulled, prolific early variety from the Viatka Reg. Experiment Station.

74026. No. 10274. *Sumrak.* Variety *cinerea.* A small-grained, thin-hulled variety from the Viatka Reg. Experiment Station. The straw makes good feed.

74027. No. 10275. Variety *aristata.* A large-grained prolific variety, resistant to lodging, from the Viatka Reg. Experiment Station.

74028. No. 10276. *Magistral.* Variety *obtusata.* A small-grained, side variety, resistant to lodging, from the Viatka Reg. Experiment Station.

74029. No. 10277. *Gentleman.* Variety *obtusata.* A small-grained, side variety from the Viatka Reg. Experiment Station.

74030. No. 25536. *Horoshkovsky.* Variety *aurea.* A large-grained, medium early variety, resistant to lodging, obtained from the Beresotochsk Experiment Station.

74031. No. 25537. *Rykhlik.* Variety *aurea.* A medium early, drought-resistant variety from the Sobezhinsk Experiment Station; resistant to lodging.

74032. No. 25538. Variety *aurea.* A medium early, small-grained variety from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy.

74033. No. 25540. A selection from *Schwedischer Weisser.* Variety *aristata.* A large-grained, medium-early variety, resistant to lodging, from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy.

74034. No. 25542. Variety *aristata.* A selection from *Duppavsky.* A large-grained, medium-early variety, resistant to lodging, from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy.

74035. No. 25545. *Korall.* Variety *mutica.* A white-kerneled variety, resistant to lodging, obtained from the Viatka Reg. Experiment Station.

74023 to 74111—Continued.

74036. No. 25548. Variety *aurea*. A large-grained variety, resistant to lodging, which is a good yielder. It is from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy.

74037. No. 25549. Variety *aurea*. A large-grained variety, resistant to lodging, which is a good yielder. It is from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy.

74038. No. 25558. *Orlovsky*. Variety *brunnea*. A small-grained, medium-early variety from the Viatka Reg. Experiment Station.

74039. No. 25566. Variety *mutica*. A white-kerneled, large-grained, late variety from the Mironovsk Experiment Station.

74040. No. 25567. *Shatilovsky Neulutchenny*. Variety *mutica*. A white-kerneled, large-grained, late variety from the Shatilov Reg. Experiment Station.

74041. No. 25569. Variety *mutica*. A large-grained, prolific, late variety obtained from the Shatilov Reg. Experiment Station.

74042. No. 25570. Variety *mutica*. A white-kerneled, large-grained, late variety from the Moscow Plant Breeding Station.

74043. No. 25571. Variety *mutica*. A white-kerneled, large-grained, prolific late variety, resistant to lodging, from the Moscow Plant Breeding Station.

74044. No. 25572. Variety *mutica*. A white-kerneled, small-grained, late variety, resistant to lodging, from the Moscow Plant Breeding Station. The percentage of hulls is low.

74045. No. 25573. Variety *mutica*. A white-kerneled, large-grained, prolific, late variety, resistant to lodging, from the Moscow Plant Breeding Station.

74046. No. 25574. A selection from *Beseler*. Variety *aristata*. A late variety, resistant to lodging, from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy.

74047. No. 25575. Variety *aristata*. A large-grained, good-yielding, late variety from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy. It originated in Germany.

74048. No. 25576. Variety *aurea*. A small-grained, prolific, late variety obtained from the Moscow Plant Breeding Station, Timiriasev Agricultural Academy. It originated in Breslau, Germany.

74049. No. 25577. *Zenit*. Variety *mutica*. A white-kerneled, large-grained, prolific late variety from the Viatka Reg. Experiment Station.

74050. No. 25579. *Practica*. Variety *montana*. A small-grained, prolific late variety from the Viatka Reg. Experiment Station.

74051. No. 25580. *Kosmach*. Variety *montana*. A small-grained, late variety, resistant to lodging, from the Viatka Reg. Experiment Station.

74052. No. 25581. *Gentleman*. Variety *obtusata*. A small-grained, prolific, late side variety, resistant to lodging, obtained from the Viatka Reg. Experiment Station.

74053. No. 25582. *Zhemchuzhina*. Variety *mutica*. A white-kerneled, small-grained, prolific late variety, resistant to lodging, obtained from the Viatka Reg. Experiment Station.

74023 to 74111—Continued.

74054. No. 25583. *Vitias*. Variety *aristata*. A small-grained, good-yielding. late variety, inclined to lodging, obtained from the Viatka Reg. Experiment Station.

74055. No. 25584. *Magistral*. Variety *obtusata*. A white-kerneled, small-grained, prolific, late side variety, resistant to lodging, obtained from the Viatka Reg. Experiment Station.

74056. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 35881. *Zheltokoryj*. From Galakan, Afghanistan. Sixty-seven days from sowing to ripening. Fruit globular, flattened, 16 by 18 centimeters, chrome yellow. Rind thin, slightly segmented. Flesh carmine tinted, sweet, juicy. Seeds black, few.

74057 to 74064. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

74057. No. 18601. *Khandaliak*. Variety *reticulatus*. From Ashkabad, Turkestan. Early melon. Sixty-four days from sowing to ripening. Fruit globular, flattened, slightly segmented, 13 by 17 centimeters, pale yellow, 10 green stripes with metallic luster from stem end to top. Rind thin with irregularly traced netting. Flesh white, stringy, sweet, juicy, slightly aromatic. Placenta firm.

74058. No. 22206. *Shakar Palak*. Variety *inodorus*. From Marghelan, Turkestan. One hundred and fourteen days from sowing to ripening. Fruit cylindric, 38 by 18 centimeters, green with dark-green stripes. Rind thick, segmented, completely netted. Flesh green, crisp, sweet, juicy, with a flavor of vanilla. Placenta firm.

74059. No. 22214. *Bos woldy*. Variety *saccharinus*. From Tashkent. Ninety-six days from sowing to ripening. Fruit elliptic, 21 by 19 centimeters, lemon yellow, 10 green stripes with metallic luster from stem end to top. Rind thick, segmented, without netting. Flesh white, mellow, with strong aroma. Placenta weak.

74060. No. 35884. *Khandaliak*. Variety *reticulatus*. From Tashkent. Early melon, 75 days from sowing to ripening. Fruit globular, flattened, 11 by 13 centimeters, pale yellow with small, greenish yellow spots. From stem end to top 10 bluish green stripes with metallic luster. Rind smooth, thin, with weak netting. Flesh pale salmon, melting, sweet, juicy, aromatic. Placenta firm.

74061. No. 35885. *Khandaliak*. Variety *reticulatus*. From Tashkent. Early melon, 78 days from sowing to ripening. Fruit globular, flattened, segmented, 9 by 13.5 centimeters, lemon yellow, 10 silvery gray stripes from stem end to top. Rind thin, green inside, with fine irregularly traced netting. Flesh salmon tinted, mellow, sweet, juicy, with flavor of pear. Placenta firm.

74062. No. 35887. *Khandaliak*. Variety *reticulatus*. From Bajram-Ali, Turkmenistan. Eighty-five days from sowing to ripening. Fruit globular, flattened, 17 by 19 centimeters, yellow with broad chrome yellowish stripes, 10 whitish green stripes with metallic luster from stem end to top. Rind thin, without netting. Flesh white, mellow, sweet, juicy, with flavor of pear. Placenta firm.

74063. No. 35889. *Kisyl Uruk*. Variety *inodorus*. From Tashkent. Ninety days from sowing to ripening. Fruit cylindric, 38 by 20 centimeters, greenish yellow. Rind thick, completely netted. Flesh white, thick, crisp, very sweet, juicy without aroma. Placenta firm.

74023 to 74111—Continued.

74064. No. 35891. *Ytch Kysyl.* Variety *inodorus.* From Tashkent. Ninety days from sowing to ripening. Fruit oval, 27 by 16 centimeters, yellowish green with dark-green stripes. Rind thick, completely netted. Flesh salmon tinted, very sweet, crisp, juicy. Placenta firm.

74065 to 74076. LENS ESCULENTA Moench. Fabaceae. Lentil.

74065. No. 1074. Variety *daghestanicum.* Pure line reproduction of the Stepnaya Experiment Station, State Institute of Experimental Agronomy and the northern Caucasian section, 1925. Seeds brown (chocolate) with black pattern, 4 to 4.5 millimeters in diameter, cotyledons orange, length of pod about 1 centimeter, flowers blue, from 6.5 to 7 millimeters long, leaves with six to eight pairs of elongated leaflets, sprouts violet.

74066. No. 3006. *Dymchataya Chechevitza.* Variety *nummularia.* Reproduction of the Stapnaya Experiment Station, State Institute of Experimental Agronomy, 1924, and the northern Caucasian section, 1925. A moderately prolific, late variety.

74067. No. 3456. Variety *nummularia.* Obtained from the Timiriasev Agricultural Academy. Reproduction of the Stepnaya Experiment Station, State Institute of Experimantal Agronomy, 1924, and the northern Caucasian section, 1925. A prolific, medium-early variety.

74068. No. 3460. *Dymchataya Chechevitza.* Variety *nummularia.* Reproduction of the Stepnaya Experiment Station, State Institute of Experimental Agronomy, 1924, and the northern Caucasian section, 1925. A moderately prolific, late variety.

74069. No. 3462. Variety *persicum.* Pure line reproduction of the Stepnaya Experiment Station, Institute of Experimental Agronomy and the northern Caucasian section, 1925. Seeds one, colored salmon pink, 3.5 to 5 millimeters in diameter, cotyledons orange, length of pod about 1 centimeter, flowers white, standard veined with blue, length of flower about 6 millimeters, leaves with four to six pairs of narrow leaflets. Drought resistant, early.

74070. No. 10046. Variety *nummularia.* From the middle Asiatic section, 1925. A prolific, late variety.

74071. No. 10047. *Tarelochanaya Chechevitza.* Variety *nummularia.* From the northern Caucasian and the middle Asiatic sections, 1925. A large-grained, late variety.

74072. No. 10048. Variety *nummularia.* From the middle Asiatic section, 1925. A moderately prolific, late variety.

74073. No. 10049. Variety. *nummularia.* From the middle Asiatic section, 1925. A late variety.

74074. No. 10050. Variety *nummularia.* From the northern Caucasian section, 1925. A prolific variety.

74075. No. 10051. Variety *nummularia.* From the middle Asiatic section, 1925. A late variety.

74076. No. 10052. Variety *nummularia.* From the middle Asiatic section, 1925. A medium-early variety.

74077 to 74083. PISUM SATIVUM L. Fabaceae. Pea.

74077. No. 10015. Obtained from the Viatka Reg. Experiment Station. Small grained, pods well filled.

74023 to 74111—Continued.

74078. No. 10016. Obtained from the Viatka Reg. Experiment Station. Small grained, pods well filled.

74079. No. 10017. Obtained from the Engelhardt Reg. Experiment Station. Small grained, pods well filled.

74080. No. 10019. Obtained from the Viatka Reg. Experiment Station. Small grained, pods well filled.

74081. No. 10257. *Gorokh Machinsky, Mulk, Mullak.* From the upper part of Zaravshan, Turkestan. An early variety used as green manure.

74082. No. 10299. Variety *griseum.* Obtained from the Timiriasev Agricultural Academy. A medium-ripening variety used as green fodder.

74083. No. 10296. *Gorokh Mestny.* From Lobanovo, Nikolsk district, North Dvinsk Government. A late variety used as green fodder.

74084 to 74103. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

74084. No. 2999. *Belokoloska.* Variety *lutescens.* An awnless, prolific variety obtained from the Saratov Reg. Experiment Station, Saratov Government.

74085. No. 3000. *Beloziornaya.* Variety *albidum.* From the Saratov Reg. Experiment Station, Saratov Government. A white awnless prolific spring variety having good milling and baking qualities.

74086. No. 3001. *Beloziornaya.* Variety *albidum.* A white awnless prolific spring variety suited to sandy soil. From the Saratov Reg. Experiment Station, Saratov Government.

74087. No. 6984. *Krasnaya Ostistaya* (red, awned). Variety *ferrugineum.* A drought-resistant spring variety from the Ekaterinoslav Reg. Experiment Station, Ukrainia.

74088. No. 6985. *Krasnaya Bezostaya* (red awnless). Variety *milturum.* A prolific, drought-resistant spring variety from the Ekaterinoslav Reg. Experiment Station, Ukrainia.

74089. No. 9446. Variety *caesium.* A prolific, flinty, red-grained, spring variety from the West Siberian Reg. Experiment Station, Omsk, Siberia.

74090. No. 9447. Variety *lutescens.* A large-grained, awnless, prolific variety from the West Siberian Reg. Experiment Station, Omsk, Siberia.

74091. No. 9449. Variety *milturum.* An awnless, drought-resistant, prolific variety, resistant to lodging, from the West Siberian Reg. Experiment Station, Omsk, Siberia.

74092. No. 9450. Variety *milturum.* An awnless, prolific, drought-resistant variety from the West Siberian Reg. Experiment Station, Omsk, Siberia.

74093. No. 10158. Variety *ferrugineum.* A hardy, prolific winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow. The original sample was obtained in 1901 from Vilmorin-Andrieux & Co., Paris, France, under the name *Blé Victoria d'automne.*

74094. No. 10159. Variety *erythrospermum.* A hardy, prolific winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow.

74023 to 74111—Continued.

74095. No. 10162. Variety *ferrugineum*. A large-grained hardy, prolific variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow.

74096. No. 10163. Variety *ferrugineum*. A hardy, prolific winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow.

74097. No. 10164. Variety *lutescens*. A hardy, prolific awnless winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow.

74098. No. 10165. Variety *albidum*. A hardy, prolific, awnless, winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow.

74099. No. 10166. Variety *milturum*. A hardy, prolific, large-grained, awnless, winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow. The original sample was obtained in 1902 from the Breslau Experiment Station, under the name *Blé rouge de St. Land*.

74100. No. 10167. Variety *alborubrum*. A hardy, prolific, awnless, winter variety from the plant-breeding station, Timiriasev Agricultural Academy, Moscow.

74101. No. 10244. Variety *graecum*. From Karshinsk Vilaet, West Bokhara. An early, prolific, large-grained, lax-eared, spring variety which is drought resistant.

74102. No. 10245. Variety *graecum*. From Karshinsk Vilaet, West Bokhara. An early, prolific, compact-eared, spring variety which is drought resistant.

74103. No. 35911. *Kooperatorka*. Variety *erythrospermum*. From the Odessa Experiment Station, Odessa. A white-eared, red-grained variety. It is one of the most early, productive, and valuable winter wheats of Ukrainia.

74104 to 74109. TRITICUM DICOCCUM Schrank. Poaceae. **Emmer.**

74104. No. 35894. Variety *farrum, f. armeniacum*. From the Stepnaya Ret. Experiment Station, State Institute of Experimental Agronomy, 1925. Affected by *Puccinia triticina* Eriks. A late form.

74105. No. 35895. Variety *farrum, f. caucasicum*. From the Stepnaya Ret. Experiment Station, State Institute of Experimental Agronomy, 1925. Affected by *Puccinia triticina* Eriks.

74106. No. 35896. Variety *farrum, f. iranicum*. From the Stepnaya Ret. Experiment Station, State Institute of Experimental Agronomy, 1925. Susceptible to *Erysiphe graminis* DC., *Puccinia glumarum* Eriks., and *Puccinia triticina* Eriks.

74107. No. 35898. Variety *farrum, f. vasconica*. From the middle Asiatic section. A winter variety prominent among other forms by its late maturity, large ear, high growth, and thick culm.

74108. No. 35900. Variety *rufum, f. asetivale*. From the Stepnaya Experiment Station, State Institute of Experimental Agronomy, 1925. Similar to *f. caucasicum* [No. 74105] except in color of ear.

74109. No. 35902. Variety *rufum, f. maturatum*. From the Stepnaya Experiment Station, State Institute of Experimental Agronomy, 1925. It is similar to *f. tataricum* except in color of ear. Susceptible to yellow rust (*Puccinia glumarum* Eriks.), brown rust (*P. triticina* Eriks.), and stem rust (*P. graminis* Pers.).

74023 to 74111—Continued.

74110 and 74111. TRITICUM PERSICUM (Bois.) Aitch. and Hemsl. Poaceae. **Persian wheat.**

74110. No. 35919. Variety *rubiginosum*. From Tiflis. Partly immune to *Erysiphe graminis* DC. An early spring variety.

74111. No. 35920. Variety *stramineum*. From Tiflis, 1925. Immune to *Erysiphe graminis* DC. An early spring variety.

74112 to 74127.

From Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received June 20, 1927.

74112. BOTOR TETRAGONOLOBA (L.) Kuntze (*Psophocarpus tetragonolobus* DC.). Fabaceae. **Goa bean.**

Borong. From Silo Maradja, Asahan. A tropical Asiatic herbaceous perennial with blue flowers. The unripe pods are eaten as a vegetable.

For previous introduction see No. 66263.

74113. CALAMUS sp. Phoenicaceae. **Palm.**

No. 7085. From Silo Maradja, Asahan. *Rotan alas*. A climbing pinnate-leaved palm with fruits resembling those of Salakka. The flesh around the seeds, however, is of a purplish gray color and has a sweet mawkish disgusting taste.

74114. DAEMONOROPS DRACO (Willd.) Blume (*Calamus draco* Willd.). Phoenicaceae.

No. 6957. From Loendoet, Koealoe. *Tjat djernang*. This is the species which yields the dragon's blood (*tjat djernang*) of the Malays.

74115. CEIBA PENTANDRA (L.) Gaertn. (*Eriodendron anfractuosum* DC.). Bombacaceae. **Kapok.**

Kaboe kaboe. From Silo Maradja, Asahan. A local form of the silk-cotton tree. The seed pods contain fiber used to stuff pillows, etc.

74116 to 74118. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From Silo Maradja, Asahan.

74116. *Goendoer bolon*.

74117. *Pitoela*.

74118. *Djelok*. The Javanese name is *waloe*. An edible-seeded variety.

74119. DRACONTOMELON sp. Anacardiaceae.

No. 7599. *Hihing*. Growing near the water at Aek Sordang, Loendoet, Koealoe. A wild species with pinnately compound alternate leaves. The clingstone fruits, about an inch in diameter, are russet yellow when ripe, with a rather nondescript but not unpleasant acid taste, and contain a single large hard seed. This species is not cultivated, as far as could be learned, but is utilized when found.

74120. DRYMOPHLOEUS sp. Phoenicaceae. **Palm.**

Boenet, Asahan. (Cultivated ornamental.) A semidwarf cespitose palm 9 to 12 feet high, with unarmed pinnate leaves and an abundance of brilliant red fleshy fruits half an inch in diameter, containing spindle-shaped longitudinally 5-furrowed seeds. The flesh probably contains rhaphides, because it is irritating to tender skin.

74121 to 74123. GNETUM spp. Gnetaceae.

Tropical Asiatic woody vines with jointed knotty branches and opposite leaves.

74121. GNETUM sp.

No. 6868. From Loendoet, Koealoe. This species may be the same as No. 7062 [No. 74122].

74112 to 74127—Continued.

74122. GNETUM sp.

No. 7062. From near Aek Sordang, Loendoet, Koealoe.

74123. GNETUM sp.

No. 7354. From Loendoet, Koealoe.

74124. MYRISTICA sp. Myristicaceae.

No. 7177. From the swampy jungle along the Soengei Moeka, downstream from Tanah Datar, Batu Bara. A tropical aromatic tree with entire leaves, inconspicuous flowers, and orange-colored fruits.

74125. PITHECOLOBIUM KUNSTLERI Prain. Mimosaceae.

No. 6374. From Hoeta Padang, Asahan. A small handsome tropical leguminous tree with attractive red pods from which purple-black seeds are suspended when the pods open.

74126. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

Tijoeng, Terong. From Silo Maradja, Asahan.

74127. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Asparagus-bean.**

Kasang poroet (stomach beans). The Javanese name is *katjang oesoes.*

74128 to 74131. LOLIUM PERENNE L. Poaceae. Perennial ryegrass.

From Aberystwyth, Wales. Seeds presented by R. G. Stapledon, director, Welsh Plant-Breeding Station, through H. N. Vinall, Bureau of Plant Industry. Received June 21, 1927.

74128. Ba 1767.
74129. Ba 1772.
74130. Ba 1773.
74131. Ba 1774.

74132. ACACIA MACRACANTHA Humb. and Bonpl. Mimosaceae.

From Caracas, Venezuela. Seeds presented by H. Pittier, Museo Comercial, Ministerio de Relaciones Exteriores. Received June 21, 1927.

A low thorny tropical tree with a depressed crown, large compound leaves, and yellow flower heads. Native to northern South America.

74133 to 74136. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Sabour, India. Seeds presented by S. K. Basu, officiating economic botanist, Bihar and Orissa. Received June 22, 1927.

Locally developed varieties.

74133. *Rahar.* Type 2 (erect).

74134. *Rahar.* Type 7 (erect).

74135. *Rahar.* Type 7 (spreading).

74136. *Rahar.* Type 12 (erect).

74137 to 74155. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Decca, Bengal, India. Seeds presented by D. Dutta, second economic botanist, Bengal Department of Agriculture. Received June 23, 1927.

Locally developed varieties.

74137. A.
74138. B.
74139. C.
74140. No. 5. *White tur rahar.*
74141. D.
74142. E.
74143. F.
74144. G.
74145. H.
74146. No. 4. *Red tur rahar.*
74147. No. 20. *Jessore rahar.*
74148. No. 9. *Rajshahai rahar.*
74149. No. 8. *Birbhum rahar.*
74150. I.
74151. J.
74152. K.
74153. L.
74154. M.
74155. N.

74156. CLIVIA MINIATA (Lindl.) Regel. Amaryllidaceae.

From Gibraltar. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 29, 1927.

A South African bulbous plant 1½ feet high, with a tuft of sword-shaped leaves and bright scarlet flowers with yellow throats, in a many-flowered umbel. The ovoid red fruits are about an inch long.

74157. CASTANEA MOLLISSIMA Blume. Fagaceae. Hairy chestnut.

From Singapore, Straits Settlements. Seeds presented by R. E. Holttum, director, botanic garden. Received March 12, 1927. Numbered in June, 1927.

A hardy chestnut, native to northeastern Asia, with edible nuts.

74158 to 74174.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received June 24, 1927.

74158. AGROSTIS INTERRUPTA L. Poaceae. **Grass.**

An annual bushy grass up to 2 feet high, native to sandy places in the Mediterranean countries.

74159. BROMUS ADOENSIS Hochst. Poaceae. **Grass.**

An Abyssinian plant 1 or 2 feet high with softly hairy foliage and nodding panicles, 3 to 5 inches long, of shining awned spikelets.

For previous introduction see No. 53036.

74160. CATAPODIUM LOLIACEUM (Huds.) Link. Poaceae. **Grass.**

A low annual prostrate-spreading grass up to 4 inches high. It is native to sandy rocky places in the Mediterranean countries.

74161. CATAPODIUM TUBERCULOSUM Moris. Poaceae. **Grass.**

An annual grass about 8 inches high, with slender stems. Native to southern Europe.

74162. CHAETURUS FASCICULATUS Link. Poaceae. **Grass.**

An annual bushy grass, upright or ascending, up to 10 inches in height. Native to the Mediterranean countries.

74163. CHLORIS CUCULLATA Bisch. Poaceae. **Grass.**

A subtropical, perennial, cespitose grass native to Mexico.

74164. CHLORIS SUBMUTICA H. B. K. Poaceae. **Grass.**

A subtropical, perennial, cespitose grass native to Mexico.

74158 to 74174—Continued.

74165. DEMAZERIA SICULA (Jacq.) Dum. Poaceae. Grass.

An annual bushy upright slender-stemmed grass usually about 8 inches high. Native to the Mediterranean countries.

74166. FESTUCA MAIREI St. Yves. Poaceae. Grass.

A Moroccan grass.

74167. GAUDINIA FRAGILIS (L.) Beauv. Poaceae. Grass.

An annual, ascending grass, up to 2 feet high, with thick, rough-hairy leaves. It is confined almost entirely to the Mediterranean countries.

For previous introduction see No. 63986.

74168. LAGURUS OVATUS L. Poaceae. Rabbit-tail grass.

A hardy annual grass native to the Mediterranean countries. The small white flower heads are used for dry bouquets.

For previous introduction see No. 66009.

74169. PASPALUM RACEMOSUM Lam. Poaceae. Grass.

A tropical American grass which is best adapted to the moist or alluvial soils of the southern United States. It grows from a rootstock, with rather coarse, tender stems and leaves, reaching a height of about 2 feet. It has promise as a hay or pasture grass.

For previous introduction see No. 63991.

74170. PHLEUM ARENARIUM L. Poaceae. Grass.

An annual, tufted, erect or ascending grass, up to a foot in height, with smooth leaves about an inch long, and cylindrical spikes. It is native to Europe and the northern coast of Africa.

For previous introduction see No. 44698.

74171. PHLEUM PANICULATUM Huds. (*P. asperum* Jacq.). Poaceae. Grass.

An erect annual or ascending grass 4 to 16 inches high. Native to the Mediterranean countries.

74172. PSILURUS ARISTATUS (L.) Lange. Poaceae. Grass.

A bushy annual grass with slender stems up to a foot high. It is native to dry rocky places in the Mediterranean countries.

74173. SCHISMUS BARBATUS (L.) Chase. Poaceae. Grass.

An annual grass with numerous spreading slender stems up to 10 inches long. Native to dry places in the Mediterranean countries.

74174. SESLERIA ARGENTEA Savi. Poaceae. Grass.

A perennial cespitose grass with stems up to a foot and a half high. Native to sandy places in the Mediterranean countries.

74175 to 74194.

From North Africa. Seeds presented through W. T. Swingle, Bureau of Plant Industry. Received June 30, 1927.

74175. ADENOCARPUS BACQUEI Batt. and Pitard. Fabaceae.

Botanic garden, Algiers, Algeria. A low ornamental leguminous shrub with yellow flowers.

74176. ALOE sp. Liliaceae.

Botanic garden, Algiers, Algeria. A tender ornamental fleshy plant with red or yellow flowers.

74175 to 74194—Continued.

74177. CITRULLUS COLOCYNTHIS (L.) Schrad. Cucurbitaceae. Colocynth.

A perennial herbaceous vine allied to the watermelon. The small round hard green and yellow fruits, 3 inches in diameter, are used medicinally as a purgative.

74178. CONVOLVULUS TRABUTIANUS Schweinf. and Muschler. Convolvulaceae.

University of Algiers, Algeria. A subtropical ornamental vine.

74179. CYTISUS BATTANDIERI Maire. Fabaceae.

As described by Dr. René Maire (Bulletin de la Station de Recherches Forestières du Nord de l'Afrique, vol. 1, p. 72), this is a handsome unarmed shrub, with large, rounded, silvery leaflets and elongated clusters of golden yellow flowers. It is native to northern Morocco, and, in the opinion of Doctor Maire, merits cultivation as an ornamental.

For previous introduction see No. 65469.

74180 and 74181. EPHEDRA ALTISSIMA Desf. Gnetaceae. Climbing joint fir.

From the Botanic Garden, Algiers, Algeria.

For previous introduction see No. 66007.

74180. A plant about 10 feet high climbing over a palm. The pink-fleshed berries are slightly oval.

74181. An attractive woody climber.

74182. FERULA COMMUNIS L. Apiaceae. Giant fennel.

A stout herbaceous perennial 8 to 12 feet high, forming a clump. The leaves are light green and the flowers yellow.

74183. HYOSCYAMUS FALEZLEZ Cos. Solanaceae. Henbane.

A coarse annual or biennial herb, possibly of medicinal value. It is eaten by goats and sheep, but is very poisonous to horses.

For previous introduction see No. 62667.

74184. HYOSCYAMUS MUTICUS L. Solanaceae. Henbane.

Like the henbane (*Hyoscyamus niger*), this plant, which is native to Egypt and western Asia, is a source of hysocyamin, an alkaloid used in the treatment of various nervous disorders. It is a thick-stemmed perennial with fleshy, ovate leaves about 4 inches long and violet-spotted, whitish flowers nearly an inch in length.

For previous introduction see No. 58601.

74185. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

Lucerne de temacine. A local variety from Algeria.

74186. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

Algerian-grown date seeds.

74187. RHUS OXYACANTHA Cav. Anacardiaceae.

A shrub with twisted thorny branches and ternate leaves.

74188. SEVERINIA BUXIFOLIA (Poir.) Ten. (*Atalantia buxifolia* Oliver). Rutaceae.

A thorny subtropical shrub resistant to alkali and salt. It has shiny green leaves, clusters of small white flowers, and dark-red berrylike fruits.

For previous introduction see No. 55495.

74189. TRITICUM TURGIDUM L. Poaceae. Poulard wheat

Krolof.

74175 to 74194—Continued.

74190. ZIZIPHUS LOTUS (L.) Lam. Rhamnaceae.

Botanic garden, Algiers, Algeria. A prickly shrub 4 feet high, with small round yellow fruits.

74191. (Undetermined.)

A poisonous leguminous plant.

74192 to 74194. TRITICUM spp. Poaceae.

Algerian varieties.

74192. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

No. 1.

74193. TRITICUM DURUM Desf. **Durum wheat.**

No. 2.

74194. TRITICUM TURGIDUM L. **Poulard wheat.**

No. 3.

74195. ERIOXYLUM ARIDUM Rose and Standl. Malvaceae.

From Mazatlan, Sinaloa, Mexico. Seeds presented by Jesus Gonzalez Ortega. Received June 30, 1927.

A tropical shrub or small tree, closely related to cotton, from the dry hills of Sinaloa, Mexico. The dark purple flowers are about 4 inches across.

74196. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Silo Maradja, Asahan, Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received June 20, 1927.

Kapas koelembang. A shrubby cotton cultivated on the East Coast, Sumatra. It is probably a type of ancient cultivation.

74197. GOSSYPIUM BREVILANATUM Hochr. Malvaceae. **Cotton.**

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received June 24, 1927.

A wild cotton relative which is native to Madagascar.

74198. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Dacca, Bengal, India. Seeds presented by D. Dutta, second economic botanist. Received June 23, 1927.

No. 18. *Rungpur rahar.* Locally grown seeds.

74199. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From Cape St. Mary, Gambia, West Africa. Seeds presented by Archibald J. Brooks, director, Department of Agriculture. Received June 24, 1927.

Red kinto.

74200 and 74201.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received June 24, 1927.

74200. CORNUCOPIAE CUCULLATUM L. Poaceae. **Grass.**

An ornamental annual grass native to the Mediterranean countries.

74201. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

A variety from the region near Lake Chad, Africa.

74202. IRIS DICHOTOMA Pall. Iridaceae. **Vesper iris.**

From Chihli Province, China. Plants collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received January 11, 1927. Numbered in June, 1927.

No. 8833. Fa Hua Ssu Temple, November 19, 1927. A tall iris, said to have white flowers, found on a very dry rocky mountain side. It is native to northern China.

For previous introduction see No. 71147.

74203. ULMUS PUMILA L. Ulmaceae. **Chinese elm.**

From Lind, Wash. Seeds presented by H. M. Wanser, superintendent, Adams Branch Experiment Station. Received June 1, 1927.

A hardy, rapid-growing Chinese elm which is drought resistant and thrives in poor soil.

74204. PHOENIX DACTYLIFERA L. Phoenicaceae. **Date palm.**

From Boudenib, Morocco. Offshoots obtained through W. T. Swingle, Bureau of Plant Industry. Received June 23, 1927.

A Moroccan variety of date.

74205. PYRUS sp. Malaceae. **Pear.**

A variety growing at the United States Plant Introduction Garden, Chico, Calif. Numbered in June, 1927.

Row 46, tree 2, old test orchard. Tree spreading, limbs small, twigs slender, and leaves small; in these characters it resembles the Seckel. Crop heavy; fruits obovate, pyriform, 2⅝ inches long and 2½ inches in diameter; skin light yellow with small inconspicuous dots; flesh white, granular, of good quality, moderately sweet; core small. The tree has shown but little injury by blight.

74206. LITCHI CHINENSIS Sonner. Sapindaceae. **Lychee.**

From China. Plants collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received June 28, 1927.

Noh mai. From Lohkongtung.

74207. GOSSYPIUM PERUVIANUM Cav. Malvaceae. **Cotton.**

From Peru. Seeds obtained through O. F. Cook, Bureau of Plant Industry. Received June 24, 1927.

C. B. 613. *Peruvian Tanguis cotton.*

74208. WERCKLEA INSIGNIS Pitt. and Standl. Malvaceae.

From San Jose, Costa Rica. Seeds presented by Carlos Wercklé. Received March 29, 1927. Numbered in April, 1927.

A handsome subtropical shrub 15 feet high, branching close to the ground, with bright-lilac flowers resembling those of Chinese hibiscus (*Hibiscus rosa-sinensis*).

For previous introduction see No. 51125.

74209. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From Upper Senegal, Africa. Seeds obtained by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 21, 1927.

No. 1299. A sorghum found near Timbuktu.

74210 to 74212.

From Canton, China. Plants collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received June 28, 1927.

74210. CITRUS sp. Rutaceae.

Sour kat.

74211 and 74212. CLAUCENA LANSIUM (Lour.) Skeels. Rutaceae. **Wampi.**

74211. *Sweet wampi* grafted on *sour kat.*

74212. *Sour wampi.*

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October 7, 1929

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INVENTORY No. 92

Washington, D. C. ▼ Issued October, 1929

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1927 (NOS. 74213 TO 75126)

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INTRODUCTORY STATEMENT

In August, 1927, one of the months included in the period covered by this inventory, an interesting collection of subtropical vegetables (Nos. 74554 to 74572) was received from the Province of Kwangtung, southeastern China, as the result of the activities of F. A. McClure, agricultural explorer. These locally developed varieties of vegetables will be tested chiefly in the Southern States, to which region they are probably best adapted.

Fourteen species and varieties of cotton (*Gossypium* spp., Nos. 74447 to 74459, 74660) were presented by the Royal Botanic Garden at Sibpur, near Calcutta, India. Also two native varieties of cotton (*Gossypium* spp., Nos. 74242, 74243) from Colombia were presented by Stanley F. Morse, of Cali, Colombia. These will be of interest to cotton breeders.

An unusual number of wheat introductions are featured in this inventory. From the College of Agriculture and Forestry at Nanking, China, four lots of local varieties were received (*Triticum* spp., Nos. 74248 to 74399, 74480 to 74485, 74708 to 74779, 74786 to 75126). The Institute of Applied Botany and New Cultures, Moscow, Russia, also sent in an interesting collection (*Triticum* spp., Nos. 74489 to 74502).

Dr. Augustine Henry, of the College of Science for Ireland, Dublin, sent in seeds of an interesting lot of ornamentals which he had collected in the French Alps (Nos. 74681 to 74690, 74703). Included in this shipment were dwarf shrubs as well as herbaceous plants.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, and the descriptive matter has been prepared under the direction of Paul Russell, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., April 17, 1929.

49628—29——1

INVENTORY[1]

74213. TERMINALIA SAFFORDII Merr. Combretaceae.

From the island of Guam. Seeds presented by C. W. Edwards, director, Guam Agricultural Experiment Station. Received August 11, 1927.

A tropical ornamental tree with broadly oval leaves and axillary racemes of small oblong fruits. Native to Guam.

74214 and 74215.

From Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received August 12, 1927.

74214. CYPERUS sp. Cyperaceae. Sedge.

No. 8214. *Galamaija.* Seeds collected between Djoema Tombak and Aek Na Gerger. A tall, soft-stemmed species used for making mats and bags. It grows wild in the little swamps, and where it occurs naturally it is increased by cutting up the clumps and tucking the divisions into new places.

74215. JATROPHA CURCAS L. Euphorbiaceae.

No. 8213. *Doelang patila.* Seeds collected between Djoema Tombak and Aek Na Gerger. A poisonous plant 5 or 6 feet high, used as a hedge plant and ornamental by the natives.

For previous introduction see No. No. 68966.

74216. BAMBUSA sp. Poaceae. **Bamboo.**

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College. Received August 15, 1927.

A tall bamboo, native to India, which is said to resemble *Bambusa tulda.*

74217. MERCURIALIS ANNUA L. Euphorbiaceae.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received August 15, 1927.

An erect European annual which bears seeds said to contain a high percentage of drying oil.

74218 and 74219. MACADAMIA TERNIFOLIA F. Muell. Proteaceae. **Macadamia.**

From Sydney, Australia. Seeds purchased from Anderson & Co. Received August 11, 1927.

Evergreen trees up to 50 feet in height, which are cultivated for their edible nuts.

74218. A thin-shelled variety.

74219. A medium-shelled variety.

74220. LITCHI CHINENSIS Sonner. Sapindaceae. **Lychee.**

From Tela, Honduras. Plants presented by Dr. Wilson Popenoe, United Fruit Co. Received September 29, 1927.

Seedling plants procured for further experimental testing in southern Florida.

For previous introduction see No. 51472.

74221. LILIUM TIGRINUM Ker. Liliaceae. **Tiger lily.**

From Yaomin, Manchuria. Bulblets collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received September 22, 1925. Numbered September, 1927.

No. 4004. August 14, 1925. Aerial bulblets from leaf axils of plants 4 feet high. These plants have from three to eight or more good flowers and leaf-axil bulblets.

74222. QUERCUS MYRSINAEFOLIA Blume. Fagaceae. **Oak.**

Trees growing at the Barbour Lathrop Plant Introduction Garden, Savannah, Ga. Numbered September, 1927.

Bell No. 1232. A handsome evergreen Japanese oak 30 to 40 feet high, with lanceolate-serrate leaves 3 to 5 inches long, smooth and shining above and covered with a whitish bloom underneath. The ovoid acorns, nearly an inch long and one-third covered by the smooth cup, are borne in short spikes.

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

74223. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). Rutaceae. Grapefruit.

From Gujranwala, Punjab, India. Seeds presented by H. S. Nesbitt, American Mission. Received September 6, 1927.

A variety called *chagodra* or *pummelo* in this region. The fruits are considerably larger than those of the American variety. The skin of light pulp is about an inch thick, and the reddish pink flesh has a fine flavor. (*Note by Mr. Nesbitt in letter of December 1, 1926.*)

74224. PLUKENETIA CONOPHORA Muell.-Arg. Euphorbiaceae.

From Victoria, Cameroon, West Africa. Seeds presented by T. S. Maitland, Superintendent, Botanic Gardens. Received August 31, 1927.

A tropical African creeping plant with thin-shelled nuts containing kernels which yield an oil used for cooking and other purposes.

74225. VALLARIS HEYNEI Spreng. Apocynaceae.

From Allahabad, India. Seeds presented by W. B. Hayes, Allahabad Agricultural Institute. Received August 31, 1927.

A climbing shrub with fragrant white flowers three-fourths of an inch wide, often cultivated as an ornamental in India, where it is native. It has milky juice, which is used medicinally and is also a possible source of rubber.

For previous introduction see No. 58594.

74226 to 74228.

From Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received September 6, 1927.

74226. ALEURITES MOLUCCANA (L.) Willd. (*A. triloba* Forst.). Euphorbiaceae. Lumbang.

No. 8743. *Boelra keras, Boewa kemiri.* From Silo Maradja, Asahan. A tropical spreading tree native to the East Indies and closely related to the tung-oil tree. The oil may be used in making varnishes.

For previous introduction see No. 67535.

74227. CALAMUS sp. Phoenicaceae. Palm.

No. 8740. *Rotan.* From Silo Maradja, Asahan. A climbing spiny tropical palm.

74228. PINANGA sp. Phoenicaceae. Palm.

From Deleng Koetoe, Karoland. A small, spineless ornamental tropical palm with a canelike habit.

74229. DENDROCALAMUS MEMBRANACEUS Munro. Poaceae. Bamboo.

From Dehra Dun, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College. Received September 7, 1927.

A bamboo native to eastern India, probably becoming very tall, with comparatively small leaves.

For previous introduction see No. 64810.

74230 to 74234.

From Calaroa, Colombia. Seeds presented by Eduardo Hernandez, Director de Agricultura y Estadistica Municipal. Received September 7, 1927.

74230. ANNONA CHERIMOLA Mill. Annonaceae. Cherimoya.

Locally grown seeds.

74231. BAUHINIA sp. Caesalpiniaceae.

Japón. An attractive subtropical tree useful as a shade tree.

74232. JUGLANS sp. Juglandaceae. Walnut.

Cedro. A subtropical timber tree with edible nuts.

74233. OCHROMA LAGOPUS Swartz. Bombacaceae. Balsa wood.

A rapid-growing tropical tree. The very light wood is useful in insulation and for life preservers.

74234. ROLLINIA MUCOSA (Jacq.) Baill. Annonaceae.

Guanabano. A small-fruited subtropical tree which is a close relative to the cherimoya. The flavor of the fruit is inferior to that of the custard-apple.

74235. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Belgian Congo, Africa. Seeds obtained through Rev. Emory Ross, Disciples of Christ Congo Mission, Bolenge, Coquilhatville. Received September 2, 1927.

Locally grown seeds from the southern part of Belgian Congo, about 100 miles from the Atlantic coast.

74236. CORNUS NUTTALLII Audub. Cornaceae.

From Seattle, Wash. Cuttings presented by A. W. Sandholm. Received September 16, 1927.

A variegated-leaved form of the western flowering dogwood. The colored bracts are usually six, tinged with pink, and often 3 inches long.

74237. ATALANTIA CITROIDES Pierre. Rutaceae.

From Santiago de las Vegas, Cuba. Seeds presented by Dr. Gonzalo M. Fortun, Director, Estación Experimental Agronómica, through W. T. Swingle, Bureau of Plant Industry. Received September 6, 1927.

A small, tropical, usually spiny tree which is of possible use as citrus stock. It is a native of Indo-China. The orangelike fruits are three-fourths of an inch in diameter.

74238. OREODOXA sp. Phoenicaceae. Palm.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received September 8, 1927.

A tall, slender, erect palm 40 to 50 feet high, with a smooth, straight, cylindrical stem and copper-red pinnate leaves 8 to 10 feet long. The hard, black wood is extensively used by the natives for construction. This palm is native to the Atlantic side of the Isthmus of Panama.

74239. MERCURIALIS ANNUA L. Euphorbiaceae.

From Montevideo, Uruguay. Seeds presented by Nicolas Lombardo, Director, Botanic Garden. Received September 15, 1927.

For previous introduction and description see No. 74217.

74240. PENNISETUM CLANDESTINUM Hochst. Poaceae. **Kikuyu grass.**

From Nairobi, Kenya Colony, Africa. Seeds presented by W. Lyne Watt, assistant agricultural officer, Scott Agricultural Laboratories. Received September 13, 1927.

A rapid-growing perennial stoloniferous grass, native to South Africa, where it is considered a valuable drought-resistant summer pasture grass.

For previous introduction see No. 48818.

74241 to 74246.

From Cali, Colombia. Seeds presented by Stanley F. Morse. Received September 27, 1927.

74241. ERIOCHLOA POLYSTACHYA H. B. K. Poaceae. **Carib grass.**

Janeiro. A grass similar to Para grass, but which makes a thicker mat and smothers weeds better.

74242. GOSSYPIUM sp. Malvaceae. **Cotton.**

From El Carmen, Cauca Valley. A cotton growing in red clay soil with little humus.

74243. GOSSYPIUM sp. Malvaceae. **Cotton.**

74244. MELINIS MINUTIFLORA Beauv. Poaceae. **Molasses grass.**

Gordura. A hardy grass with a great range of climatic and soil tolerance, growing well under very dry or very wet conditions. It grows from sea level to over 5,000 feet altitude.

For previous introduction see No. 56484.

74245. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

Huesito, Blanquillo. A bush variety 18 inches high, which is a soft, well-flavored bean. It stands hot weather conditions and may thrive in the South as a rotation crop for cotton. This variety is also used as a snap bean.

74246. (Undetermined.)

Chonta. From Santa Maria, Colombia. A palm growing at altitudes between 3,000 and 5,000 feet. It is used for house rafters.

74247 to 74399.

From Nanking, China. Seeds obtained from the College of Agriculture and Forestry, University of Nanking. Received September 12, 1927.

Local varieties.

74247. HORDEUM VULGARE COELESTE L. Poaceae. **Six-rowed barley.**

No. 275.

74248 to 74399. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

74247 to 74399—Continued.

74248. No. 2.
74249. No. 8.
74250. No. 16.
74251. No. 27.
74252. No. 35.
74253. No. 48.
74254. No. 53.
74255. No. 56.
74256. No. 62.
74257. No. 77.
74258. No. 84.
74259. No. 92.
74260. No. 96.
74261. No. 104.
74262. No. 126.
74263. No. 128.
74264. No. 158.
74265. No. 166.
74266. No. 169.
74267. No. 174.
74268. No. 184.
74269. No. 188.
74270. No. 195.
74271. No. 206.
74272. No. 228.
74273. No. 238.
74274. No. 249.
74275. No. 251.
74276. No. 252.
74277. No. 258.
74278. No. 262.
74279. No. 289.
74280. No. 291.
74281. No. 299.
74282. No. 302.
74283. No. 317.
74284. No. 333.
74285. No. 341.
74286. No. 346.
74287. No. 348.
74288. No. 369.
74289. No. 366.
74290. No. 385.
74291. No. 389.
74292. No. 391.
74293. No. 403.
74294. No. 413.
74295. No. 427.
74296. No. 436.
74297. No. 441.
74298. No. 492.
74299. No. 495.

74247 to 74399—Continued.

74300. No. 505.
74301. No. 515.
74302. No. 519.
74303. No. 521.
74304. No. 532.
74305. No. 533.
74306. No. 542.
74307. No. 546.
74308. No. 554.
74309. No. 569.
74310. No. 572.
74311. No. 576.
74312. No. 587.
74313. No. 591.
74314. No. 588.
74315. No. 602.
74316. No. 623.
74317. No. 631.
74318. No. 647.
74319. No. 653.
74320. No. 656.
74321. No. 661.
74322. No. 676.
74323. No. 719.
74324. No. 721.
74325. No. 733.
74326. No. 771.
74327. No. 781.
74328. No. 794.
74329. No. 811.
74330. No. 826.
74331. No. 828.
74332. No. 836.
74333. No. 837.
74334. No. 837–a.
74335. No. 839.
74336. No. 841.
74337. No. 857.
74338. No. 866.
74339. No. 873.
74340. No. 898.
74341. No. 929.
74342. No. 959.
74343. No. 967.
74344. No. 978.
74345. No. 981.
74346. No. 985.
74347. No. 1041.
74348. No. 1065.
74349. No. 1079.
74350. No. 1102.
74351. No. 1124.
74352. No. 1128.

74247 to 74399—Continued.

74353. No. 1132.
74354. No. 1166.
74355. No. 1178.
74356. No. 1187.
74357. No. 1191.
74358. No. 1196.
74359. No. 1201.
74360. No. 1202.
74361. No. 1205.
74362. No. 1238.
74363. No. 1251.
74364. No. 1255.
74365. No. 1266.
74366. No. 1269.
74367. No. 1275.
74368. No. 1279.
74369. No. 1285.
74370. No. 1286.
74371. No. 1289.
74372. No. 1299.
74373. No. 1308.
74374. No. 1312.
74375. No. 1318.
74376. No. 1326.
74377. No. 1328.
74378. No. 1332.
74379. No. 1337.
74380. No. 1341.
74381. No. 1344.
74382. No. 1349.
74383. No. 1357.
74384. No. 1361.
74385. No. 1365.
74386. No. 1412.
74387. No. 1421.
74388. No. 1425.
74389. No. 1436.
74390. No. 1447.
74391. No. 1467.
74392. No. 1473.
74393. No. 1491.
74394. No. 1499.
74395. No. 1501.
74396. No. 1505.
74397. No. 1531.
74398. No. 1549.
74399. No. 1563.

74400 and 74401. DATURA spp. Solanaceae.

From Brisbane, Queensland, Australia. Seeds presented by C. T. White, Government botanist, botanic gardens. Received July 1, 1927.

74400 and 74401—Continued.

74400. DATURA FEROX L.

A coarse annual herb, 3 feet high, with white flowers, native to China. It is of possible medicinal value.

74401. DATURA LEICHHARDTII F. Muell.

A tall coarse herb with irregularly toothed oval leaves 3 to 4 inches long, yellowish white flowers about 3 inches long, and very prickly globular capsules about an inch in diameter. The plant is native to northern Australia. It is of possible medicinal value.

For previous introduction see No. 55622.

74402 to 74404.

From Baghdad, Iraq. Seeds presented by F. K. Jackson, Officiating Inspector General of Agriculture. Received July 1, 1927.

74402. LATHYRUS SATIVUS L. Fabaceae. Bitter vetch.

Iraq vetch. From the Central Experiment Station at Rustam.

74403 and 74404. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

From the Central Experiment Station at Rustam.

74403. A red variety.

74404. A white variety.

74405. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Montserrat, British West Indies. Seeds presented by C. A. Gomez, Curator, Grove Botanic Garden. Received July 2, 1927.

Early Asher. A locally grown variety.

74406 and 74407. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Port of Spain, Trinidad, British West Indies. Seeds presented by W. G. Freeman, Director, Department of Agriculture. Received July 5, 1927.

Locally grown varieties.

74406. *Hawaii.* 74407. *Trinidad.*

74408. CROTALARIA JUNCEA L. Fabaceae. Sunn hemp.

From Mayaguez, Porto Rico. Seeds purchased from Dr. D. W. May, Agricultural Experiment Station. Received July 7, 1927.

Porto Rican grown seeds.

74409. CARICA PAPAYA L. Papayaceae. Papaya.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received July 7, 1927.

A selected cylindrical type of papaya grown in the Canal Zone.

For previous introduction see No. 73065.

74410 and 74411. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture. Received July 7, 1927.

74410 and 74411—Continued.

Locally grown varieties.

74410. *Ordinary.* 74411. *Pinogo.*

74412. DANTHONIA SEMIANNULARIS (Labill.) R. Br. Poaceae. Grass.

From Sydney, New South Wales, Australia. Seeds purchased from Arthur Yates & Co. Received July 8, 1927.

A perennial tufted grass, producing a fair amount of soft succulent fodder suitable for either sheep or cattle. The leaves are narrow, usually hairy, and light green. The flower stems grow about 2 feet high, and the seed, which sheds easily, is produced in clusters that have a white woolly appearance when ripe. *Wallaby* grass provides good pasturage during the spring and summer and remains green in the winter months.

For previous introduction see No. 59361.

74413. BAMBUSA TULDA Roxb. Poaceae. Bamboo.

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College. Received July 8, 1927.

One of the most promising species introduced, though it does not stand much frost. The culms are green and smooth and under good conditions may reach a height of 60 to 70 feet and a diameter of 2 to 5 inches. They are nearly solid and extremely tough and strong. The culms split easily and therefore lend themselves to many uses. The plant is quite leafy and proves a beautiful ornamental with its graceful leaning stems and tropical frondage. Native to Bengal, India.

For previous introduction see No. 67507.

74414. CEIBA PENTANDRA (L.) Gaertn. (*Eriodendron anfractuosum* DC.). Bombaceae. Kapok.

From Surabaya, Java. Seeds obtained through W. S. Fields, Federal Horticultural Board. Received July 5, 1927.

A tall tropical American tree. The pods contain down which is used for stuffing mattresses, etc.

For previous introduction see No. 73840.

74415 to 74421.

From Leningrad, Russia. Seeds presented by A. Kol, chief, bureau of introduction, Institute of Applied Botany and New Cultures. Received July 6, 1927.

74415. BRASSICA sp. Brassicaceae.

Material received as a round, white, red-topped turnip.

74416 to 74421. DATURA STRAMONIUM L. Solanaceae.

Locally grown seeds of jimson weeds from Russia.

74416. No. 1. From the Mohilev Government.

74417. No. 2. From the botanic garden, Kharkof.

74418. No. 3. From the Nikitsky Botanic Garden, Yalta, Crimea.

74419. No. 4. From Lubny.

74420. No. 5. From Volynia.

74415 to 74421—Continued.

74421. No. 6. From the botanic garden, Tashkent, Turkestan.

74422 to 74424.

From Richmond, Victoria, Australia. Seeds presented by F. H. Baker. Received July 6, 1927.

74422. ACACIA DECURRENS Willd. Mimosaceae. Green wattle.

A handsome Australian tree with light-green foliage and bright-yellow flowers.

For previous introduction see No. 67946.

74423. ACACIA DISCOLOR Willd. Mimosaceae.

A tall, unarmed shrub or small tree, native to southeastern Australia and Tasmania, which bears, in autumn, terminal and axillary clusters of yellow flowers.

For previous introduction see No. 67947.

74424. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). Myrtaceae. Lemon bottlebrush.

An ornamental red-flowered shrub with rigid branches. Native to Australia.

74425. CORYPHA ELATA Roxb. Phoenicaceae. Palm.

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture. Received July 7, 1927.

A tall Philippine palm up to 60 feet high, with spiny stems and fan-shaped leaves.

For previous introduction see No. 35639.

74426. FICUS CRASSIUSCULA Warb. Moraceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received July 6, 1927.

A large Central American tree with a rounded crown, dark-green leathery, oblong-oval leaves up to 20 centimeters long, and pink fruits about 2 centimeters in diameter.

74427 to 74430. PRUNUS spp. Amygdalaceae.

From Jamaica Plain, Mass. Cuttings presented by E. H. Wilson, Arnold Arboretum. Received July 11, 1927.

74427. PRUNUS CERASUS L. Sour cherry.

Variety *Rhexii*. A weeping variety.

74428. PRUNUS INCISA Thunb. Mame cherry.

An ornamental Japanese cherry which is described (Arnold Arboretum Bulletin of Popular Information, vol. 8, no. 3) as a large shrub, or sometimes a small tree, about 25 feet high. The flowers, which appear in drooping clusters before the deeply cut leaves, are white or rosy, with bright-red calyxes and bright-yellow anthers. The petals fall early, but the calyxes, which gradually grow brighter, remain on the young fruits for some time and are quite showy.

For previous introduction see No. 64669.

74427 to 74430—Continued.

74429. PRUNUS MEYERI Rehder.

In 1906 Frank N. Meyer, while carrying on agricultural explorations in northern Chosen, collected seeds of a small wild cherry (No. 20084), which, according to his note, was of handsome appearance and suited for growing in parks. At the Arnold Arboretum a tree grown from one of these seeds was described as new by Alfred Rehder (Journal of the Arnold Arboretum, vol. 2, no. 2, p. 123) and named for Mr. Meyer. Doctor Rehder states that this appears to be a hybrid between *Prunus maackii* and *P. maximowiczii*, since it has characters intermediate between these two species. The tree is about 20 feet high, of vigorous growth, with a dense pyramidal habit and pleasing bright-green foliage. The small white flowers are in dense racemes.

For previous introduction see No. 68949.

74430. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Mak. Sargent cherry.

A hardy vigorous Japanese wild cherry with single pink flowers. The tree is tall and very attractive.

74431. FICUS sp. Moraceae.

Plants growing at the Chapman Field Garden, Coconut Grove, Fla. Numbered July, 1927.

An undetermined species to be grown for identification.

74432. ORYZA SATIVA L. Poaceae. Rice.

From Canton, China. Seeds presented by L. A. Whitney, Honolulu, Hawaii, through E. R. Sasscer, Federal Horticultural Board. Received July 8, 1927.

Nyn jim (sharp silver). A superior variety of Chinese rice which is said to be resistant to the blast disease.

74433 to 74438. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Poona, Bombay, India. Seeds presented by Prof. G. B. Patwardhan, agricultural economic botanist, Bombay Agricultural Department. Received July 13, 1927.

Locally developed strains.

74433. No. 1.
74434. No. 2.
74435. No. 3.
74436. No. 4.
74437. No. 5.
74438. No. 6.

74439 to 74441. AVENA SATIVA L. Poaceae. Oats.

From Carignan, Ardennes, France. Seeds presented by Denaiffe & Fils. Received July 11, 1927.

French winter-oat varieties.

74439. A black variety.

74440. A gray variety.

74441. A white variety.

74442. CITRUS SINENSIS (L.) Osbeck. Rutaceae. Sweet orange.

74442—Continued.

From Soledad, Cienfuegos, Cuba. Cuttings presented by Robert M. Grey, superintendent of the biological laboratory and botanic garden of the Institute for Tropical Biology and Medicine of Harvard University. Received July 18, 1927.

Harvard No. 2. A locally grown variety.

74443. GOSSYPIUM ARBOREUM L. Malvaceae. **Cotton.**

From Sibpur, near Calcutta, India. Seeds presented by C. C. Calder, Superintendent, Royal Botanic Garden, through T. H. Kearney, Bureau of Plant Industry. Received July 5, 1927.

Locally grown seeds.

For previous introduction see No. 73125.

74444. ACHRAS ZAPOTA L. Sapotaceae. **Sapodilla.**

From Bathurst, Gambia, West Africa. Seeds presented by James Howie. Received July 18, 1927.

A small tropical American tree with dark-green, leathery leaves, and roundish fruits about 3 inches in diameter; these have thin skin and pale-brown soft juicy sweet pulp.

For previous introduction see No. 50466.

74445 and 74446.

From Paris, France. Seeds presented by Maurice Jeanson. Received July 15, 1927.

74445. CARISSA EDULIS Vahl. Apocynaceae.

A tropical African shrub, producing small purple edible fruits, which is said to endure some frost.

74446. MUSA sp. Musaceae.

An Abyssinian wild banana with edible roots, which is said to endure slight frost.

74447 to 74459. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Sibpur, near Calcutta, India. Seeds presented by C. C. Calder, Superintendent, Royal Botanic Garden, through T. H. Kearney, Bureau of Plant Industry. Received July, 1927.

74447. GOSSYPIUM ARBOREUM L.

A red variety.

74448. GOSSYPIUM INTERMEDIUM Todaro.

A yellow variety.

74449 to 74453. GOSSYPIUM NEGLECTUM Todaro.

74449. No. 2. Variety *vera.*

74450. No. 3. Variety *vera.* Subvariety *malvensis.*

74451. No. 4. Variety *vera.* Subvariety *kathiawarensis.*

74452. No. 5. Variety *rosea.*

74453. No. 6. Variety *rosea.* Subvariety *cutchica.*

74454 to 74457. GOSSYPIUM OBTUSIFOLIUM Roxb.

74454. No. 1. Variety *sindica.*

74447 to 74459—Continued.

74455. No. 7. *Nadam.*

74456. No. 8. Variety *coconada.*

74457. No. 11. *Rozi.*

74458 and 74459. GOSSYPIUM SANGUINEUM Hassk.

74458. No. 9. *Major.*

74459. No. 10. *Major.*

74460 to 74469.

From Konjeni Siding, Luchenza, Nyasaland Protectorate, Africa. Seeds presented by L. S. Norman. Received July 18, 1927.

74460. ANDROPOGON SCHIRENSIS Hochst. Poaceae. **Grass.**

A tall erect perennial grass 3 to 10 feet high, densely tufted, with very narrow leaves. Native to tropical Africa.

74461. CHAETOCHLOA sp. Poaceae. **Grass.**

A tropical African grass.

74462. CLEISTACHNE SORGHOIDES Benth. Poaceae. **Grass.**

A coarse tropical annual grass up to 9 feet high, sparingly branched, with long flat leaves. Native to tropical Africa.

74463. ERAGROSTIS CILIARIS (L.) Link. Poaceae. **Grass.**

An annual tufted grass up to 2 feet high, growing on sandy soil. It is said to afford good grazing in India.

74464. PANICUM MAXIMUM Jacq. Poaceae. **Grass.**

An erect perennial bunch grass 4 to 6 feet high, with open spreading panicles of spikelets. It is a native of Africa, introduced into tropical America, where it is cultivated for forage, furnishing pasture and green food.

For previous introduction see No. 56284.

74465. PASPALUM SCROBICULATUM L. Poaceae. **Grass.**

An erect annual grass, averaging 2 feet in height, native to India, where it is also extensively cultivated for the edible grain. The grain is poisonous, however, unless kept for a number of years. Cattle are fond of the grass when it is young; at the time of ripening it is poisonous to stock.

For previous introduction see No. 56789.

74466. PENNISETUM PURPUREUM Schumach. Poaceae. **Napier grass.**

A variety growing under dry-land conditions.

For previous introduction see No. 54513.

74467. PENNISETUM SETOSUM L. Rich. Poaceae. **Grass.**

A robust perennial grass 2 to 4 feet high, distributed throughout the Tropics of both hemispheres, and often used for forage.

For previous introduction see No. 58037.

74460 to 74469—Continued.

74468. RYTILIX GRANULARIS (L.) Skeels. Poaceae. **Grass.**

An erect annual grass 1 to 2 feet high, with softly hairy flaccid leaves. Native to tropical India.

For previous introduction see No. 47783.

74469. SPOROBOLUS sp. Poaceae. **Grass.**

A tropical African grass.

74470. STURTIA COSSYPIOIDES R. Br. Malvaceae.

From Adelaide, South Australia. Seeds presented by J. F. Bailey, Director, Botanic Garden. Received July 21, 1927.

A large Australian shrub, with broadly oval, stiff leaves up to 2 inches long, and large purple flowers. It is closely related to cotton (*Gossypium* spp.).

For previous introduction see No. 72621.

74471 and 74472. PHOENIX DACTYLIFERA L. Phoenicaceae. **Date palm.**

From Merowe, Dongola, Anglo-Egyptian Sudan, Africa. Offshoots presented through Silas C. Mason, Bureau of Plant Industry. Received July 25, 1927.

Rare Sudan varieties.

74471. *Kumla.* **74472.** *Medina.*

74473. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Pretoria, Union of South Africa. Seeds presented by I. B. Pole Evans, Chief, Division of Botany. Received July 25, 1927.

Locally grown seeds from Muhlati, Natal, South Africa.

74474 to 74478.

From Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received July 20, 1927.

74474. CASUARINA SUMATRANA Jungh. Casuarinaceae.

No. 7493. From the Toba trail between Adian Langge, Asahan, and Si Makkoek, Toba. A handsome tropical tree with large cones.

For previous introduction see No. 68021.

74475. PHYTOLACCA sp. Phytolaccaceae.

No. 7006. An ornamental annual, weedy in the uplands, but cultivated by the natives in the lowlands.

74476. SCIRPUS sp. Cyperaceae. **Sedge.**

No. 7426. Kampong Halado, between Adian Langge and Si Martoloe, Toba. A Sumatran sedge with glabrous 3-angled stems, used by natives for making matting and bags.

74477. SLOANEA sp. Elaeocarpaceae.

No. 7386a. A large handsome tropical forest tree with fruits that look like chestnut burs.

74478. DRACAENA sp. Liliaceae.

From the Soengei Masihi Forest Reserve, Asahan. Collected by H. S. Yates. An ornamental monocotyledonous tropical tree with long, thickish, glossy mottled leaves and orange-yellow fruits about an inch in diameter.

74479. MELILOTUS ALTISSIMA Thuill. Fabaceae.

From Chico, Calif. Seeds obtained from the United States Plant Introduction Garden. Received July 20, 1927.

A perennial Melilotus attaining a height of from 4 to 6 feet and in general growth habits similar to the more common *Melilotus alba.*

74480 to 74485. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Nanking, China. Seeds obtained from the College of Agriculture and Forestry, University of Nanking. Received September 12, 1927.

Local varieties.

74480. No. 2451.	**74483.** No. 2469.
74481. No. 2459.	**74484.** No. 2479.
74482. No. 2464.	**74485.** No. 2483.

74486 to 74488.

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College. Received July 26, 1927.

74486. BAMBUSA ARUNDINACEA Retz. Poaceae. **Bamboo.**

A large Indian bamboo growing in clumps 40 to 60 feet high, with spiny lower branches.

74487. DENDROCALAMUS HAMILTONII Nees and Arn. Poaceae. **Hamilton bamboo.**

The common bamboo of the eastern Himalayas, where it grows to a height of from 40 to 60 feet, with horizontal branches, and stems 4 to 7 inches in diameter. The foliage is very variable, the broadly lanceolate leaves being 4 to 16 inches long and up to 5 inches wide. The plant is said to flower every year, and the young shoots are boiled and eaten.

For previous introduction see No. 64809.

74488. DENDROCALAMUS MEMBRANACEUS Munro. Poaceae. **Bamboo.**

For previous introduction and description see No. 74229.

74489 to 74502. TRITICUM sp. Poaceae.

From Moscow, Russia. Seeds presented by V. Talanoff, Institute of Applied Botany and New Cultures, through C. R. Ball, Bureau of Plant Industry. Received July 26, 1927.

Locally developed varieties.

74489 to 74499. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

74489. No. 062. *Lutescens.* A spring wheat from the Saratov Experiment Station.

74490. No. 0111. *Caesium.* A spring wheat from the West Siberian Experiment Station.

74491. No. 0274. *Mildurum.* A spring wheat from the Odessa Experiment Station.

74492. No. 0321. *Mildurum.* A spring wheat from the West Siberian Experiment Station.

74489 to 74502—Continued.

74493. No. 0604. *Albidum.* A spring wheat from the Saratov Experiment Station.

74494. No. 0721. *Albidum.* A spring wheat from the Saratov Experiment Station.

74495. No. 0237. *Nostianum.* A winter wheat from the Saratov Experiment Station.

74496. No. 0329. *Lutescens.* A winter wheat from the Saratov Experiment Station.

74497. *Cooperatorka.* A winter wheat from the Odessa Experiment Station.

74498. *Stepniatschka.* A winter wheat from the Odessa Experiment Station.

74499. *Ukrainka.* A winter wheat from the Vironovsk Experiment Station.

74500 to 74502. TRITICUM DURUM Desf. Durum wheat.

74500. No. 010. *Hordeiforme.* From the Ekaterinoslav Experiment Station.

74501. No. 069. *Melanopus.* From the Krasnokut Experiment Station.

74502. No. 0189. *Hordeiforme.* From the Krasnokut Experiment Station.

74503. PHYTELEPHAS MACROCARPA Ruiz and Pav. Phoenicaceae. **Ivory-nut palm.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received July 25, 1927.

A tall tropical American palm with a thick rough trunk and foliage resembling that of the coconut palm. The bony fruits are used for making buttons, etc.

For previous introduction see No. 47513.

74504. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Tschechnitz und Kattern, Germany. Seeds obtained from Doctor Kroll, through A. J. Pieters, Bureau of Plant Industry. Received September 15, 1927.

Locally grown seeds.

74505. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Eldorado, Sinaloa, Mexico. Seeds presented by Redo & Co. Received July 27, 1927.

Seeds from a tree said to be a Mulgoba seedling. The fruits are of very good quality.

74506. PHYLLOCLADUS RHOMBOIDALIS L. Rich. Taxaceae.

From Hobart, Tasmania. Seeds presented by L. A. Evans, Secretary of Agriculture, Agricultural and Stock Department. Received July 25, 1927.

An ornamental tree, related to the yew, up to 60 feet high, with leaflike branches and minute leaves. Native to Australia.

74507. SCHIZOSTACHYUM LUMAMPAO (Blanco) Merr. Poaceae. **Bamboo.**

From Manila, Philippine Islands. Seeds presented by Arthur F. Fischer, Director, Bureau of Forestry. Received July 29, 1927.

74507—Continued.

An erect thin-walled bamboo growing in large patches, especially where forests have been burned away, in the Philippine Islands. According to Munro, sticks from this plant are said to be commonly sold in Manila.

74508. TECOMELLA UNDULATA (J. E. Smith) Seem. (*Tecoma undulata* Don). Bignoniaceae.

From Nice, France. Seeds presented by Dr. A. Robertson-Proschowsky. Received July 21, 1927.

A subtropical shrub or small tree with narrow-oblong leaves up to 6 inches long and orange flowers 1½ inches wide produced in small clusters. It is native to western India.

74509. TECOMELLA UNDULATA (J. E. Smith) Seem. (*Tecoma undulata* Don). Bignoniaceae.

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College. Received July 25, 1927.

For previous introduction and description see No. 74508.

74510. PRUNUS CAPULI Cav. Amygdalaceae. **Capulin.**

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received July 21, 1927.

Seeds collected in Vera Cruz, at an altitude of 2,000 meters.

74511. CLEMATIS ARMANDI Franch. Ranunculaceae. **Armand clematis.**

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, superintendent, La Mortola. Received July 29, 1927.

A fragrant white-flowered species which is characterized by the abundance and the persistence of its foliage. Native to Hupeh Province, China.

For previous introduction see No. 63392.

74512 to 74515.

From Montevideo, Uruguay. Seeds presented by Nicolas Lombardo, Director, Botanic Garden. Received August 1, 1927.

74512. ANTHEPHORA HERMAPHRODITA (L.) Kuntze. Poaceae. **Grass.**

A leafy ascending or decumbent branching annual grass with thin flat blades. A common weed in the lowlands of tropical America.

74513. CHLORIS CARIBAEA Spreng. Poaceae. **Grass.**

An annual, erect, leafy grass, native to the West Indies, with linear, flat leaves about a foot high.

For previous introduction see No. 62040.

74514. CHLORIS CILIATA Swartz. Poaceae. **Grass.**

A perennial grass with erect stems, 10 to 20 inches high. Native to Uruguay.

For previous introduction see No. 62041.

74512 to 74515—Continued.

74515. CISTUS CYPRIUS Lam. Cistaceae.

An erect shrub up to 6 feet high, bearing large white flowers which are blotched with purple at the base. Native to southern Europe.

74516 to 74522. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Kampala, Uganda Protectorate, Africa. Seeds presented by S. Simpson, Director, Department of Agriculture. Received August 4, 1927.

Locally developed.

74516. No. 1.
74517. No. 2.
74518. No. 3.
74519. No. 4.
74520. No. 5.
74521. No. 6.
74522. No. 7.

74523. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From Calcutta, India. Seeds presented by S. Percy Lancaster, Secretary, Agri-Horticultural Society of India. Received August 3, 1927.

Seeds of a usually seedless guava which may again develop the seedless variety.

74524 to 74526. DIOSPYROS LOTUS L. Diospyraceae. **Dateplum.**

From Seoul, Chosen (Korea). Seeds presented by Charles H. Stephan, American vice consul. Received August 2, 1927.

74524. From Kokai Province.

74525. From Hokwa district, North Keisho Province.

74526. From North Chusei Province.

74527. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Saigon, Cochin China. Seeds presented by I. Bobin, Chief of Agricultural Service. Received August 8, 1927.

Locally grown seeds.

74528. (Undetermined.)

From Freetown, Sierra Leone, Africa. Seeds presented by M. T. Dawe, Lands and Forests Department. Received August 8, 1927.

The fruits make a fine jelly not unlike guava jelly.

74529 to 74543.

From Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received August 4, 1927.

74529. BOTOR TETRAGONOLOBA (L.) Kuntze (*Psophocarpus tetragonolobus* DC.). Fabaceae. **Goa bean.**

Ksang borong. From Silo Maradja, Asahan.

74530. CALAMUS sp. Phoenicaceae. **Palm.**

Rotan tolpaktolpang. From the jungle near Aek Sordang, Loendoet, Koealoe.

74531. CALAMUS sp. Phoenicaceae. **Palm.**

No. 8184. *Rotan mallo.* From Pargambiran, Asahan.

74529 to 74543—Continued.

74532. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

From Loendoet, Koealoe. A tropical American plant supposed to have been introduced into Sumatra with mimosa seed shipped from South America, which within three or four years has become an important economic plant. It is extensively used as a cover plant in rubber plantations in Sumatra. A fair cover is obtained after three months from sowing, when flowering commences. The plant is a vigorous creeping herb which forms a mat of foliage 1½ feet or so in thickness over the soil. The stems, 3 to 10 feet long, form roots at each node. The pale blue flowers are in racemes 1 to 4 inches long.

For previous introduction see No. 68845.

74533. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From Silo Maradja, Asahan. *Goendoer bandihe.* A variety used for food.

74534. DRACAENA sp. Liliaceae.

No. 8150. Silo Maradja, Asahan. A giant species having glossy green mottled leaves over 2 feet long. The fruits are orange colored for a long time, then turn vermilion when dead ripe. This species probably will grow only in the warmest parts of the United States. Perhaps the same as No. 74478.

74535. GAULTHERIA sp. Ericaceae.

No. 8028. From the summit of Dolok Soeroengan, Habinsaran, Tapianoeli. A very pretty white-flowered species about 2 or 3 feet high, having the odor of wintergreen oil.

74536 to 74538. MOMORDICA CHARANTIA L. Cucurbitaceae. **Balsam-pear.**

From Silo Maradja, Asahan.

74536. *Parija sina.* This is a good variety.

74537. *Parija gading* (ivory parija).

74538. *Parija-parija paet.* This variety is like *parija,* but it is bitter.

74539. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

Kasang riti. From Silo Maradja, Asahan.

74540. RHODODENDRON sp. Ericaceae.

No. 7998. From the summit of Dolok Soeroengan, Habinsaran, Tapianoeli.

74541. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

Tijoeng boelat. From Silo Maradja, Asahan. A variety with edible fruits.

74542. VIBURNUM sp. Caprifoliaceae.

No. 7849. Between Pardoeaan and Maranti, Habinsaran, Tapianoeli.

74543. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Asparagus bean.**

Kasang gomboeng. From Silo Maradja, Asahan.

74544 and 74545.

From Montpellier, France. Seeds presented by the director of the botanic garden of the University of Montpellier. Received August 8, 1927.

74544 and 74545—Continued.

74544. EUPHORBIA AMYGDALOIDES L. Euphorbiaceae.

A semishrubby plant whose seeds yield a drying oil.

74545. MERCURIALIS TOMENTOSA L. Euphorbiaceae.

A herbaceous plant the seeds of which yield a drying oil.

74546 to 74548.

From Argentina. Seeds presented by Prof. Lorenzo R. Parodi, University of Buenos Aires. Received August 8, 1927.

74546. BROMUS COLORATUS Steud. Poaceae. Grass.

From Tierra del Fuego.

74547. CHLORIS ARGENTINA (Hack.) Lillo and Parodi. Poaceae. Grass.

From Santiago del Estero. An erect, perennial grass 1 to 3 feet high, native to sandy places in Argentina.

For previous introduction see No. 62066.

74548. CHLORIS POLYDACTYLA (L.) Swartz. Poaceae. Grass.

From Santiago del Estero. A grass about 1½ feet high, with seed stalks running up to 3 feet. It seeds profusely and is said to be good, when young, as a pasture grass.

74549 to 74553.

From Paris, France. Seeds presented by Maurice Jeanson. Received August 8, 1927.

74549. BRASSICA sp. Brassicaceae.

An edible wild cabbage originally from Ankober, Ethiopia.

74550. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. Squash.

A very interesting variety, originally from northern France. It should be tested in the southern United States.

74551. GUIZOTIA ABYSSINICA (L. f.) Cass. Asteraceae.

Originally from Ankober, Ethiopia. An annual plant, 6 to 8 feet high, with showy yellow flower heads. The black shining seeds furnish the Niger oil of commerce.

For previous introduction see No. 58741.

74552. IPOMOEA sp. Convolvulaceae. Morning-glory.

Originally from Ankober, Ethiopia.

74553. RUBUS MACROCARPUS Benth. Rosaceae. Colombian blackberry.

Originally from Bogota, Colombia. A rather coarse-growing blackberry with rough leaves and large maroon-red juicy berries. Native to moist regions in the South American Andes at altitudes of 8,500 to 9,500 feet.

For previous introduction see No. 72989.

74554 to 74572.

From China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received August 15, 1927.

74554. ALLIUM sp. Liliaceae.

No. A–17. Canton, June, 1927. *Tsung.* An onion planted in this region during February and March.

74555. BASELLA RUBRA L. Basellaceae.

No. A–14. Canton, June, 1927. *Uen ip tang tsoi.* A variety planted during the early spring; the stems are ready to use by May and are eaten at a potherb.

74556 to 74559. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. Waxgourd.

74556. No. A–5. Canton, June, 1927. *Tsing pei tung kwa.* A variety planted in this region during February.

74557. No. A–6. Konmoon, June, 1927. *Paak pei tung kwa* (white-skinned wax melon). A variety planted during February; the fruits are ready to be harvested in July.

74558. No. A–18. From Fatshan, Kwangtung, June, 1927. *Wong no tsit kwa.* A variety planted during February.

74559. No. A–19. From Fatshan, Kwangtung, June, 1927. *Tsing pei tsit kwa.* A variety planted during February.

74560. CACARA EROSA (L.) Kuntze (*Pachyrhizus angulatus* Rich.). Fabaceae. Yam bean.

No. A–16. From Shuitung, Kwangtung, June, 1927. *Shui tung sha kat.* A variety planted during February or March; the roots are ready to use by the end of summer.

74561. CORIANDUM SATIVUM L. Apiaceae. Coriander.

No. A–20. From Canton, June, 1927. *Uen sai.* A variety planted throughout the year.

74562. CUCUMIS MELO L. Cucurbitaceae. Melon.

No. A–9. From Hanau, Kwangtung, June, 1927. *Mau pack kwa.* A variey planted during February and May; the first harvest begins in June.

74563. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

No. A–8. From Fatshan, Kwangtung, June, 1927. *Tai tsing pi wong kwa.* A variety planted during February and June; the first harvest begins in June.

74564. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. Cushaw.

No. A–10. From Canton, June, 1927. *Tai chung faan kwa.* A variety planted during February and harvested in the late summer.

74565. IPOMOEA REPTANS (L.) Poir. (*I. aquatica* Forsk.). Convolvulaceae.

No. A–15. From Canton, June, 1927. *Pak kwat ung tsoi.* A variety planted during February and March; the stems are ready to use in May.

74554 to 74572—Continued.

74566. LUFFA ACUTANGULA (L.) Roxb. Cucurbitaceae. **Singkwa towelgourd.**

No. A–7. From Namshektan, Kwangtung, June, 1927. *Shing kwa.* An annual climber planted in February and harvested in June.

74567. MOMORDICA CHARANTIA L. Cucurbitaceae. **Balsam-pear.**

No. A–12. From Canton, June, 1927. A cucurbitaceous vine planted in February and harvested in July.

74568. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

No. A–13. From Canton, June, 1927. *Paak pei ai kwa.* A variety planted in January and February; the harvesting begins in May.

74569 to 74572. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Asparagus-bean.**

74569. No. A–1. From Chiuchow, Kwangtung, June, 1927. *Paat uet kok.* A variety planted in March.

74570. No. A–2. From Fatshan, Kwangtung, June, 1927. *Chi kap tsing tan.* A variety planted from February until April.

74571. No. A–3. From Fatshan, Kwangtung, June, 1927. *Sai uen tan kok.* A variety planted during February.

74572. No. A–4. From Hapoonue, Kwangtung, June, 1927. *Kam shan tan kok.* A variety planted during February.

74573. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Florence, Tuscany, Italy. Seeds purchased from Comizio Agrario di Firenze. Received August 18, 1927.

Locally grown seed.

74574 to 74587.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Botanic Gardens. Received August, 1927.

74574. AESCHYNOMENE AMERICANA L. Fabaceae.

A West Indian bushy leguminous herbaceous annual, 2 feet high, with yellow flowers.

74575. ASSONIA PALMATA (Cav.) Kuntze (*Dombeya acutangula* Cav.). Sterculiaceae.

An evergreen subtropical tree, up to 16 feet high, with rounded heart-shaped leaves crowded at the ends of the branchlets and loose clusters of white or reddish flowers. Native to the Mascarene Islands, Indian Ocean.

74576. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

For previous introduction and description see No. 74532.

74577. CASSIA BICAPSULARIS L. Caesalpiniaceae.

A tropical-American evergreen shrub 4 feet high, with pinnate leaves and yellow flowers.

For previous introduction see No. 50654.

74574 to 74587—Continued.

74578. CASSIA PAPUANA Hort. Caesalpiniaceae.

A tropical ornamental shrub with pinnate foliage and yellow flowers.

For previous introduction see No. 69148.

74579. CLITORIA HETEROPHYLLA Lam. Fabaceae.

An East Indian perennial climber with very slender stems, compound leaves, and solitary blue flowers.

For previous introduction see No. 65298.

74580. CROTALARIA ANAGYROIDES H. B. K. Fabaceae.

A tropical American shrubby leguminous plant, up to 6 feet high, used as a cover plant in the East Indies.

For previous introduction see No. 66251.

74581. HOMALOCENCHRUS HEXANDRUS (Swartz) Kuntze. Poaceae. **Rice grass.**

An Australian perennial grass, common along watercourses in New South Wales and Queensland. It becomes about 3 feet high, is very leafy, and livestock are very fond of it.

For previous introduction see No. 47025.

74582. LICUALA AMPLIFRONS Miquel. Phoenicaceae. **Palm.**

A showy dwarf fan palm with leaves about 2½ feet long and usually 12 parted. Native to Sumatra.

For previous introduction see No. 68121.

74583. PITHECOLOBIUM UMBELLATUM (Vahl) Benth. Mimosaceae.

A low ornamental leguminous tree with feathery foliage, native to the East Indies.

For previous introduction see No. 69161.

74584. PONGAMIA PINNATA (L.) W. F. Wight (*P. glabra* Vent.). Fabaceae.

A tall erect tree, or sometimes a climbing shrub, with compound leaves composed of five to seven pairs of oblong leaflets, and simple racemes of white flowers. The woody pods are about one-fourth of an inch thick and an inch and a half long. Native to tropical Asia. Because of its bright, handsome foliage this tree has been recommended as an ornamental for mild-wintered regions.

For previous introduction see No. 66152.

74585. SESBANIA PALUDOSA Jacq. Fabaceae.

A yellow-flowered annual with compound leaves.

74586. SINDORA SUMATRANA Miquel. Caesalpiniaceae.

An unarmed ornamental East Indian tree with panicles of small flowers and stiff pinnate leaves with few leaflets.

For previous introduction see No. 69165.

74574 to 74587—Continued.

74587. VIGNA LUTEA (Swartz) A. Gray. Fabaceae.

An East Indian leguminous creeper, of possible value as a cover plant or green forage.

For previous introduction see No. 60253.

74588. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Sweet orange.**

From Brisbane, Queensland, Australia. Plants presented by G. Williams, Department of Agriculture and Stock, through W. T. Swingle, Bureau of Plant Industry. Received August 11, 1927.

Byfield seedless orange. A very vigorous and productive tree originating near Brisbane. The fruit is of excellent quality with no seeds.

74589. CITRUS sp. Rutaceae.

From Pasoeroean, Java. Seeds presented by E. de Vries, Government horticulturist. Received August 11, 1927.

A very prolific Citrus of unknown origin, growing in Java, which is called the Japanese lemon, though it is not a lemon. Perhaps it is a natural hybrid between the lemon and tangerine. The fruits make an excellent orange-colored squash. In the experiment garden at Java it is used as a stock for *Citrus nobilis*, the only good stock which we so far have in Java. It is also an excellent stock for *C. grandis*. The tree is susceptible to scab (Cladosporium)). In Java the seedlings bear freely at 3 or 4 years old. (*Note by Mr. de Vries in letter dated May 22, 1927.*)

74590. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

From Gambia, West Africa. Seeds presented by A. J. Brooks, Director, Department of Agriculture. Received August 29, 1927.

An African form of the famous Palmyra palm of India. Though a slow grower, it is a very handsome palm when old. Inasmuch as it grows in the dry coastal regions of Ceylon, is apparently able to withstand any amount of lime, and is said to have even been successfully used as a binder for sand dunes, it should prove of real value in the calcareous soils of southern Florida. In the number of uses to which it is put in Ceylon it rivals the coconut. A delicate sugar is made from the sap, which flows in abundance from its inflorescence when cut. The seeds are germinated, and the young subterranean hypocotyl is used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance and when ripe exhales a delicate fragrance. The hull is eaten by the Tamils of Ceylon.

For previous introduction see No. 73399.

74591 to 74593. FICUS spp. Moraceae.

From the island of Guam. Seeds presented by C. W. Edwards, Director, Agricultural Experiment Station. Received August 8, 1927.

74591. FICUS MARIANNENSIS Merr.

A giant banyan fig which is epiphytic on other trees. The latex is astringent and is used to stop the flow of blood. This variety is native to Guam.

74591 to 75593—Continued.

74592. FICUS PHILIPPINENSIS Miquel.

A tropical tree, from Guam, with aerial roots growing from the trunk.

74593. FICUS TINCTORIA Forst. f.

A tropical tree from Guam, with branching aerial roots and small red fruits.

74594 to 74596.

From Bordeaux, Gironde, France. Seeds presented by Prof. L. Beille, Director, Botanic Garden of Talence. Received August 8, 1927.

74594. CHENOPODIUM QUINOA Willd. Chenopodiaceae. **Quinoa.**

A South American herbaceous plant about 6 feet high, the seeds of which are used for food.

For previous introduction see No. 73271.

74595. ELAEAGNUS PUNGENS REFLEXA (Morr. and Dec.) Rehder. Elaeagnaceae. **Bronze elaeagnus.**

An ornamental spreading hardy somewhat spiny Japanese shrub up to 4 meters high, with oval-lanceolate leaves, silvery white, fragrant flowers in small pendulous clusters, followed by red fruits.

For previous introduction see No. 73272.

74596. PTEROCARYA FRAXINIFOLIA (Lam.) Spach (*P. caucasica* Meyer). Juglandaceae. **Caucasian wingnut.**

A handsome spreading tree 60 feet or less in height, with attractive dark-green pinnate leaves about a foot long. It is native to the Caucasus and will probably not prove hardy north of Massachusetts.

For previous introduction see No. 73273.

74597 to 74652.

From Tientsin, China. Seeds presented by Rev. B. M. Flory, the Church of the Brethren Mission. Received August 8, 1927.

74597. ACER sp. Aceraceae. **Maple.**

A hardy species.

74598. ASCLEPIAS sp. Asclepiadaceae. **Milkweed.**

A hardy perennial.

74599. ASTRAGALUS sp. Fabaceae.

A hardy leguminous herbaceous plant which may be an ornamental.

74600 to 74602. BERBERIS spp. Berberidaceae. **Barberry.**

74600. BERBERIS sp.

No. 1.

74601. BERBERIS sp.

No. 2.

74602. BERBERIS sp.

No. 3.

74603 and 74604. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

Locally grown seeds.

74603. No. 1. 74604. No. 2.

74597 to 74652—Continued.

74605 to 74609. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

Local varieties.

74605. No. 1. **74608.** No. 4.

74606. No. 2. **74609.** No. 5.

74607. No. 3.

74610 to 74615. CLEMATIS spp. Ranunculaceae.

74610. CLEMATIS sp.

No. 1.

74611. CLEMATIS sp.

No. 2.

74612. CLEMATIS sp.

No. 3.

74613. CLEMATIS sp.

No. 4.

74614. CLEMATIS sp.

No. 5.

74615. CLEMATIS sp.

No. 6.

74616. COTONEASTER sp. Malaceae.

A hardy shrub.

74617 and 74618. CUCUMIS MELO L. Cucurbitaceae. Melon.

Local varieties.

74617. No. 1. **74618.** No. 2.

74619. DAUCUS CAROTA L. Apiaceae. Carrot.

A local variety.

74620 to 74622. DELPHINIUM spp. Ranunculaceae. Larkspur.

Hardy herbaceous perennials.

74620. DELPHINIUM sp.

No. 1.

74621. DELPHINIUM sp.

No. 2.

74622. DELPHINIUM sp.

No. 3.

74623. DIOSPYROS KAKI L. f. Diospyraceae. Kaki.

74624 and 74625. EUONYMUS spp. Celastraceae.

Hardy woody plants which are usually ornamental.

74624. EUONYMUS sp.

No. 1.

74625. EUONYMUS sp.

No. 2.

74626. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. Buckwheat.

Locally grown seeds.

74627. FRAXINUS sp. Oleaceae. Ash.

74628. HYDRANGEA sp. Hydrangeaceae.

A hardy ornamental shrub.

74629. HYPERICUM sp. Hypericaceae.

A hardy yellow-flowered ornamental shrub.

74597 to 74652—Continued.

74630 and 74631. LILIUM spp. Liliaceae. Lily.

Hardy lilies.

74630. LILIUM sp.

No. 1.

74631. LILIUM sp.

No. 2.

74632 and 74633. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

Local varieties.

74632. No. 1. **74633.** No. 2.

74634. ORYZA SATIVA L. Poaceae. Rice.

Locally grown seeds.

74635. PHASEOLUS AUREUS Roxb. Fabaceae. Mung bean.

A local variety.

74636. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

A local variety.

74637. PHILADELPHUS sp. Hydrangeaceae.

A hardy ornamental shrub.

74638. RAPHANUS SATIVUS L. Brassicaceae. Radish.

A local variety.

74639. RHODODENDRON sp. Ericaceae.

A hardy ornamental shrub.

74640. RIBES sp. Grossulariaceae. Currant.

A wild red currant.

74641 to 74644. ROSA spp. Rosaceae. Rose.

74641. ROSA sp.

No. 1.

74642. ROSA sp.

No. 2.

74643. ROSA sp.

No. 3.

74644. ROSA sp.

No. 4.

74645 to 74647. SPIRAEA spp. Rosaceae. Spirea.

Hardy ornamental shrubs.

74645. SPIRAEA sp.

No. 1.

74646. SPIRAEA sp.

No. 2.

74647. SPIRAEA sp.

No. 3.

74648. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

Locally grown seeds.

74649 and 74650. VIBURNUM spp. Caprifoliaceae.

Hardy ornamental shrubs.

74649. VIBURNUM sp.

No. 1.

74650. VIBURNUM sp.

No. 2.

74597 to 74652—Continued.

74651 and 74652. ZEA MAYS L. Poaceae. Corn.

Locally grown seeds.

74651. No. 1. 74652. No. 2.

74653. CARPOTROCHE BRASILIENSIS (Raddi) Endl. Flacourtiaceae.

From Vicosa, Minas Geraes, Brazil. Seeds presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria. Received May 10, 1926. Numbered September, 1927.

A tropical tree native to central Brazil. A sirup said to cure leprosy and an ointment used for skin affections are prepared from the seeds.

For previous introduction see No. 64443.

74654. RIBES sp. Grossulariaceae. Black currant.

From Shitoukhetsy, Manchuria. Plants obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received November 17, 1926. Numbered September, 1927.

No. 7268. A cultivated form of the Manchurian wild black currant.

74655 and 74656.

From West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March and April, 1927. Numbered September, 1927.

74655. COLA ACUMINATA (Beauv.) Schott and Endl. Sterculiaceae. Cola nut.

No. 1157. From the jungle near Duala, Cameroon, February 6, 1927. An unusually vigorous strain of the cola nut. The tree is 40 feet high, with large leathery leaves and large pods inclosing purplish seeds which contain caffein.

For previous introduction see No. 42359.

74656. NAGEIA sp. (*Podocarpus* sp.). Taxaceae.

No. 1206. Buea, Cameroon, February 12, 1927. A tall handsome tropical evergreen tree with somewhat pendulous branches.

74657 and 74658. PSIDIUM GUAJAVA L. Myrtaceae. Guava.

From Calcutta, India. Seeds presented by S. Percy Lancaster, Secretary, Agri-Horticultural Society of India. Received August 29, 1927.

74657. A soft-seeded variety which is sweet and very prolific.

74658. For previous introduction and description see No. 74523.

74659. CAJANUS INDICUS Spreng. Fabaceae. Pigeon pea.

From Tananarive, Madagascar. Seeds presented by the Chief of the Agricultural Service. Received August 29, 1927.

A variety cultivated in Madagascar.

74660. GOSSYPIUM ARBOREUM L. Malvaceae. Cotton.

74660—Continued.

From Sibpur, near Calcutta, India. Seeds presented by C. C. Calder, Superintendent, Royal Botanic Garden, through T. H. Kearney, Bureau of Plant Industry. Received August 18, 1927.

Locally grown seeds.

For previous introduction see No. 74443.

74661. LEEA INDICA (Burm. f.) Merr. Vitaceae.

From Takengon, Sumatra. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May 14, 1926. Numbered July, 1927.

A tropical shrub or small tree with attractive pinnate-crenate bronzy leaves.

74662 to 74667.

From Sumatra. Seeds collected by H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received August 30, 1927.

74662. CITRUS sp. Rutaceae.

No. 8600. The wild orange of Si Naboen, growing in the forest belt around the middle of the mountain near the path leading up from Kampong Goeroe Kinajan, Karoland. The tree, as it grows in the jungle, is 6 to 8 inches in diameter, smooth barked, and branched above. The fruits are sour but have a very good flavor and are about 3½ inches in diameter and 2½ inches long. The skin is thick and peels off only moderately easily. The stem end is indented, and the other end has a low prominence. This species has been planted in the kampongs to a small extent, but is said by the natives to be wild, whereas the following [No. 74663], sent for comparison, is cultivated only.

74663. CITRUS sp. Rutaceae.

Bĕrastagi, Karoland. The sweet fruits are smaller than those of the former [No. 74662], often being only 2 inches in diameter, or even less; the largest fruits are about 3 inches in diameter. The skin is very thin and easy to peel.

74664. CROTALARIA STRIATA D.C. Fabaceae.

Hisik-kisik. From Silo Maradja, Asahan. A tropical East Indian leguminous plant, possibly useful as a cover crop.

74665. MAGNOLIA sp. Magnoliaceae.

No. 8535. From Dĕlĕng Singkoet, near Bĕrastagi, Karoland. A large, handsome tropical tree.

74666. PINANGA sp. Phoenicaceae. Palm.

No. 8554. From Dĕlĕng Singkoet, near Bĕrastagi, Karoland. An attractive tropical palm 6 to 12 feet high with reedlike stems.

74667. QUERCUS sp. Fagaceae. Oak.

No. 8654. From Goenoeng Si Naboen, Karoland. A large tree.

74668. IRIS SINTENISII Janka. Iridaceae.

From Philadelphia, Pa. Plants presented by Mrs. J. Norman Henry. Received September 30, 1927.

A rather small iris from southeastern Europe and Asia Minor, which has stiff, very narrow leaves a foot long, a slender stem, and small bright-lilac flowers.

74669 to 74671.

From Haiti. Seeds and plants presented by F. C. Baker, Bureau of Plant Industry. Received September 19, 1927.

74669 and **74670.** BACTRIS PLUMERIANA Mort. Phoenicaceae. **Palm.**

A rather low Brazilian palm with a spiny stem, pinnate leaves, and pale greenish yellow flowers.

74669. Seeds. **74670.** Plant.

74671. COCCOTHRINAX ANOMALA Beccari. Phoenicaceae. **Palm.**

A medium-sized West Indian palm with terminal fan-shaped leaves and small berrylike juicy black fruits.

74672 and 74673.

From Leningrad Russia. Seeds presented by A. Kol, chief, bureau of introduction, Institute of Applied Botany and New Cultures. Received September 19, 1927.

74672. AVENA SATIVA L. Poaceae. **Oats.**

No. 10274. *Sumrak.* Variety *cinerea.* A small-grained, thin-hulled variety obtained from the Viatka Reg. Experiment Station, Viatka Government.

74673. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 36106. *Kooperatorka.* Variety *erythrospermum.* From the Odessa Experiment Station, Odessa. A white-eared, red-grained variety which is one of the earliest, most productive, and valuable winter wheats of the Ukraine.

74674 to 74679.

From Brignoles, France. Seeds presented by R. Salgues. Brignoles Botanic Station. Received September 20, 1927.

74674. ARMERIA BUPLEUROIDES Gren. and Godr. Plumbaginaceae.

A plantainlike hardy herbaceous perennial a foot high, with red flowers. Native to southern Europe.

74675. ASTRAGALUS GLYCYPHYLLOS L. Fabaceae.

A prostrate, spreading herbaceous perennial, native to Asia Minor.

For previous introduction see No. 66520.

74676. CISTUS MONSPELIENSIS L. Cistaceae. **Montpelier rockrose.**

An ornamental white-flowered shrub, native to the Mediterranean region.

74677. JUNIPERUS PHOENICEA L. Pinaceae. **Phoenician juniper.**

A low, ornamental evergreen tree about 20 feet high, native to dry places in the Mediterranean countries.

For previous introduction see No. 69855.

74678. PISTACIA CHINENSIS Bunge. Anacardiaceae. **Chinese pistache.**

A fairly rapid-growing tree native to central China. The wood is durable and much used for furniture and agricultural implements. The young shoots are edible, and the seeds furnish an illuminating oil.

For previous introduction see No. 72633.

74674 to 74679—Continued.

74679. TEUCRIUM FLAVUM L. Menthaceae.

A hardy herbaceous perennial mint, 2 feet high, with yellow flowers. Native to the Mediterranean countries.

74680. GREVILLEA BANKSII R. Br. Proteaceae.

From Santa Barbara, Calif. Seeds collected by John A. Stevenson, Bureau of Plant Industry. Received September 23, 1927.

An upright ornamental subtropical Australian tree which has carmine flowers.

For previous introduction see No. 50332.

74681 to 74690.

From Europe. Seeds collected by Dr. Augustine Henry, College of Science for Ireland, Dublin, Irish Free State. Received September 19, 1927.

These seeds were growing in the French Alps at altitudes between 4,500 and 7,500 feet.

74681. AMELANCHIER ROTUNDIFOLIA (Lam.) Dum.-Cours. Malaceae.

A hardy ornamental European shrub or small tree, about 20 feet high, growing at an altitude of 5,000 feet. The leaves are rounded, the white flowers being over an inch in diameter, and the fruits are first red, later becoming black.

74682. CENTAUREA RHAPONTICUM L. Asteraceae.

A hardy herbaceous purple-flowered European perennial growing at an altitude of 7,000 feet.

74683. CLEMATIS ALPINA Mill. Ranunculaceae.

A hardy herbaceous climber, native to the mountains of Europe, Siberia, and western Canada, growing at an altitude of 5,000 feet. It has white leaves, and the flowers vary from blue to white.

For previous introduction see No. 53137.

74684. HIPPOPHAE RHAMNOIDES L. Elaeagnaceae. **Common sea-buckthorn.**

A spiny deciduous hardy shrub with silvery foliage and orange-yellow fruits, native to western Asia, at an altitude of 5,000 feet.

74685. LATHYRUS sp. Fabaceae.

A climbing leguminous plant with conspicuous red flowers, growing at altitudes between 5,000 and 6,000 feet.

74686. LONICERA ALPIGENA L. Caprifoliaceae. **Honeysuckle.**

A hardy ornamental European shrub 6 feet high, growing at an altitude of 7,000 feet. It has yellow, red-tinged flowers and red cherrylike berries.

For previous introduction see No. 53707.

74687. ONONIS sp. Fabaceae.

A small leguminous alpine plant growing at an altitude of 5,000 feet.

74688. PRIMULA sp. Primulaceae. **Primrose.**

A small alpine primrose growing at an altitude of 5,000 feet.

74681 to 74690—Continued.

74689. SAMBUCUS RACEMOSA L. Caprifoliaceae. European red elder.

A hardy ornamental shrub, 12 feet high, growing at an altitude of 5,000 feet. The terminal cymes of small yellowish flowers are succeeded by scarlet fruits. Native to continental Europe and Asia.

For previous introduction see No. 65506.

74690. SORBUS CHAMAEMESPILUS Crantz. Malaceae. Mountain-ash.

A hardy European shrub about 6 feet high, growing at an altitude of 5,000 feet. It has pinkish flowers and brownish red fruits in dense corymbs.

74691. RUBUS sp. Rosaceae. Blackberry.

From Kosseir, Syria (near Damascus). Seeds collected by F. G. Krauss, University of Hawaii. Received September 23, 1927.

A variety producing an abundance of small fruits. The plants from which these seeds were obtained were of virogous growth, notwithstanding the very arid condition along the roadway.

74692. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. Six-rowed barley.

From Iraq. Seeds collected by F. G. Krauss, University of Hawaii. Received September 26, 1927.

A local variety collected at Iraq in August, 1927.

74693 and 74694. ZEA MAYS L. Poaceae. Corn

From Palestine. Seeds collected by F. G. Krauss, University of Hawaii. Received September 26, 1927.

74693. No. 771. A local variety received as *Palestinian white point.*

74694. No. 454. A local variety received as *Palestinian white dent.*

74695. KENNEDIA RUBICUNDA Vent. Fabaceae.

From Richmond, Australia. Seeds presented by R. H. Baker. Received September 27, 1927.

A leguminous climbing shrub with dark-green leaves and large attractive dark-red flowers.

For previous introduction see No. 58036.

74696 and 74697.

From Matania el Saff, Egypt. Seeds presented by Alfred Bircher, Director, Middle-Egypt Botanic Station. Received September 30, 1927.

74696. CASUARINA LUEHMANNI R. T. Baker. Casuarinaceae.

A tree 80 to 100 feet high, with light-colored branchlets and flattened cones half an inch in diameter. The wood is hard and close-grained.

74697. EHRETIA LAEVIS Roxb. Boraginaceae.

A subtropical evergreen shrub 12 feet high, with white flowers. Native to southern Asia.

74698 and 74699. DATISCA CANNABINA L. Datiscaceae.

From Cluj, Rumania. Seeds presented by Dr. A. Borza, Director, Botanic Garden, University of Cluj. Received September 30, 1927.

A hardy herbaceous perennial 4 feet high, with greenish yellow flowers. It is native to the Himalayas. The roots are used as a source of yellow dye.

74698. No. 926. 74699. No. 927.

74700 to 74702. OXALIS TUBEROSA Molina. Oxalidaceae.

From Tucuman, Argentina. Tubers presented by S. Heredia Luna, National University of Tucuman. Received September 6, 1927.

A South American plant related to the wood sorrel of the United States. It is grown in the Andes for its edible tubers.

74700. No. 1.

74701. No. 2.

74702. No. 3. A red variety.

74703. (Undetermined.)

From Europe. Seeds collected by Dr. Augustine Henry, College of Science for Ireland, Dublin, Irish Free State. Received September 19, 1927.

A small erect leguminous alpine plant growing in the French Alps at an altitude of 5,000 feet.

74704. MERCURIALIS ANNUA L. Euphorbiaceae.

From Cluj, Rumania. Seeds presented by Dr. A. Borza, Director, Botanic Garden, University of Cluj. Received September 2, 1927.

An annual erect herb with opposite narrow leaves, native to Europe. It is to be grown to determine the iodin content of the seeds.

For previous introduction see No. 74217.

74705 to 74707. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

From Africa. Offsboots presented by Dr. L. Trabut, Government botanist, Algiers, Algeria, through W. T. Swingle, Bureau of Plant Industry. Received August 23, 1927.

74705. *Deglet beida.* From near El Arfiane, in the vicinity of Biskra, Algeria.

74706. *M'sh degla.* From B'skra, Algeria.

74707. *Arishty.* From Biskra, Algeria.

74708 to 74779. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From Nanking, China. Seeds obtained from the College of Agriculture and Forestry, University of Nanking. Received September 12, 1927.

Local varieties.

74708. No. 1569.

74709. No. 1572.

74710. No. 1573.

74711. No. 1585.

74708 to 74779—Continued.

74712. No. 1591.
74713. No. 1602.
74714. No. 1627.
74715. No. 1655.
74716. No. 1665.
74717. No. 1671.
74718. No. 1674.
74719. No. 1694.
74720. No. 1696.
74721. No. 1708.
74722. No. 1716.
74723. No. 1727.
74724. No. 1739.
74725. No. 1740.
74726. No. 1757.
74727. No. 1769.
74728. No. 1772.
74729. No. 1778.
74730. No. 1781.
74731. No. 1791.
74732. No. 1801.
74733. No. 1803.
74734. No. 1807.
74735. No. 1812.
74736. No. 1835.
74737. No. 1846.
74738. No. 1862.
74739. No. 1867.
74740. No. 1871.
74741. No. 1873.
74742. No. 1885.
74743. No. 1896.
74744. No. 1899.
74745. No. 1908.
74746. No. 1911.
74747. No. 1924.
74748. No. 1928.
74749. No. 1945.
74750. No. 1956.
74751. No. 1961.
74752. No. 1975.
74753. No. 1979.
74754. No. 1999.
74755. No. 2002.
74756. No. 2017.
74757. No. 2031.
74758. No. 2049.
74759. No. 2057.
74760. No. 2128.
74761. No. 2144.
74762. No. 2179.
74763. No. 2183.
74764. No. 2188.

74708 to 74779—Continued.

74765. No. 2192.
74766. No. 2224.
74767. No. 2247.
74768. No. 2275.
74769. No. 2277.
74770. No. 2301.
74771. No. 2341.
74772. No. 2343.
74773. No. 2379.
74774. No. 2404.
74775. No. 2413.
74776. No. 2418.
74777. No. 2423.
74778. No. 2444.
74779. No. 2448.

74780 to 74785. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by Dr. A. H. Kirby, Director, Department of Agriculture. Received July 25, 1927.

74780. No. 15. *Tendekwa.* From Sima, Mwanza district.

74781. No. 16. *Balaschoo.* From Kilimanjaro, Moshi district.

74782. No. 17. *Tendekwa.* From Nassa, Maswa district.

74783. No. 18. *Itendekwa.* From Buchossa, Uzinza district.

74784. No. 19–A. *Mbaazi, Shoo.* From Upare, Moshi district.

74785. No. 20–B. *Mbaazi, Shoo.* From Upare, Moshi district.

74786 to 75126. TRITICUM spp. Poaceae.

From Nanking, China. Seeds obtained from the College of Agriculture and Forestry University of Nanking. Received September 12, 1927.

74786 to 75114. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

Local varieties.

74786. No. 2535.
74787. No. 2537.
74788. No. 2548.
74789. No. 2549.
74790. No. 2576.
74791. No. 2585.
74792. No. 2591.
74793. No. 2597.
74794. No. 2603.
74795. No. 2609.
74796. No. 2615.
74797. No. 2617.
74798. No. 2625.
74799. No. 2627.
74800. No. 2639.

74786 to 75126—Continued.

74801. No. 2641.
74802. No. 2678.
74803. No. 2681.
74804. No. 2688.
74805. No. 2697.
74806. No. 2699.
74807. No. 2701.
74808. No. 2709.
74809. No. 2712.
74810. No. 2721.
74811. No. 2724.
74812. No. 2735.
74813. No. 2736.
74814. No. 2745.
74815. No. 2765.
74816. No. 2772.
74817. No. 2786.
74818. No. 2794.
74819. No. 2795.
74820. No. 2796.
74821. No. 2809.
74822. No. 2813.
74823. No. 2823.
74824. No. 2827.
74825. No. 2829.
74826. No. 2833.
74827. No. 2854.
74828. No. 2857.
74829. No. 2887.
74830. No. 2912.
74831. No. 2941.
74832. No. 2947.
74833. No. 2955.
74834. No. 2969.
74835. No. 2976.
74836. No. 2984.
74837. No. 2988.
74838. No. 2992.
74839. No. 2995.
74840. No. 3001.
74841. No. 3006.
74842. No. 3008.
74843. No. 3019.
74844. No. 3023.
74845. No. 3032.
74846. No. 3041.
74847. No. 3102.
74848. No. 3111.
74849. No. 3119.
74850. No. 3129.
74851. No. 3134.
74852. No. 3136.
74853. No. 3143.

74786 to 75126—Continued.

74854. No. 3144.
74855. No. 3152.
74856. No. 3165.
74857. No. 3166.
74858. No. 3181.
74859. No. 3199.
74860. No. 3201.
74861. No. 3206.
74862. No. 3225.
74863. No. 3226.
74864. No. 3229.
74865. No. 3236.
74866. No. 3243.
74867. No. 3248.
74868. No. 3252.
74869. No. 3261.
74870. No. 3263.
74871. No. 3278.
74872. No. 3281.
74873. No. 3291.
74874. No. 3296.
74875. No. 3305.
74876. No. 3309.
74877. No. 3313.
74878. No. 3318.
74879. No. 3322.
74880. No. 3323.
74881. No. 3337.
74882. No. 3342.
74883. No. 3348.
74884. No. 3364.
74885. No. 3369.
74886. No. 3372.
74887. No. 3377.
74888. No. 3381.
74889. No. 3386.
74890. No. 3394.
74891. No. 3401.
74892. No. 3409.
74893. No. 3412.
74894. No. 3416.
74895. No. 3424.
74896. No. 3425.
74897. No. 3436.
74898. No. 3438.
74899. No. 3447.
74900. No. 3481.
74901. No. 3485.
74902. No. 3497.
74903. No. 3502.
74904. No. 3505.
74905. No. 3509.
74906. No. 3517.

74786 to 75126—Continued.

74907. No. 3518.
74908. No. 3528.
74909. No. 3532.
74910. No. 3543.
74911. No. 3576.
74912. No. 3587.
74913. No. 3592.
74914. No. 3599.
74915. No. 3605.
74916. No. 3617.
74917. No. 3624.
74918. No. 3629.
74919. No. 3635.
74920. No. 3639.
74921. No. 3647.
74922. No. 3657.
74923. No. 3662.
74924. No. 3668.
74925. No. 3673.
74926. No. 3675.
74927. No. 3684.
74928. No. 3691.
74929. No. 3692.
74930. No. 3702.
74931. No. 3706.
74932. No. 3717.
74933. No. 3719.
74934. No. 3721.
74935. No. 3722.
74936. No. 3731.
74937. No. 3741.
74938. No. 3752.
74939. No. 3759.
74940. No. 3762.
74941. No. 3769.
74942. No. 3774.
74943. No. 3775.
74944. No. 3781.
74945. No. 3796.
74946. No. 3799.
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October 10, 1929

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 93

Washington, D. C. ▼ Issued December, 1929

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1927 (NOS. 75127 TO 75844)

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INTRODUCTORY STATEMENT

In presenting an inventory of the material which has passed through the Office of Foreign Plant Introduction for the period included between October 1 and December 31, 1927, it is scarcely enough to report that the serial numbers include 718 introductions, a statement as dull in itself as the reading of any inventory is likely to be. But before commenting in any way upon the items which make up this list, the reader should be reminded of several things.

Before all else, this inventory must be considered as a record, a historical document. In it are listed the names of all species and varieties received, together with brief notes concerning the nature of the material, the source, and a description. It in no way indicates the disposition of the material, nor does it suggest its present whereabouts. The reader is urged to remember that this is not a statement of material on hand, to be consulted like a catalogue from a nursery. It should be consulted to discover how far about the globe the office reaches out to procure the plants which it brings in for use in this country. The mere list of contributing countries fires the imagination—Argentina, Australia, Brazil, Cameroon, Canal Zone, Ceylon, Chile, China, Chosen, Colombia, Egypt, England, Fiji Islands, France, French Guinea, Gambia, Germany, Gold Coast, Hawaii, India, Italy, Japan, Java, Kenya Colony, Manchuria, Mexico, New South Wales, New Zealand, Nyasaland Protectorate, Palestine, Persia, Philippines, Rhodesia, Russia, Scotland, Sierra Leone, Spain, Tanganyika Territory, and Uganda. Practically every corner of the globe has contributed to the stream of introductions which are being brought in for our national development. Here are recorded findings of several collectors and two expeditions, as well as the varied contributions of the many collaborators who further the work of the office.

Conspicuous among these are the chestnuts that have been sent in by R. Kent Beattie, of the Office of Forest Pathology, who has been studying chestnuts in the Orient with a view to collecting trees that will be valuable in replacing our American chestnuts, which are disappearing as a result of the chestnut blight. Other collections from Mr. Beattie which are specifically related to projects within the department here are the azaleas and lilies which appear conspicuously among the ornamentals he has sent.

More than 100 numbers are used to record the plants sent in from the expedition in Africa under Messrs. Kephart and Piemeisel, whose particular interest centered in forage crops, both the grasses and legumes.

57034—29——1

Tropical plants of particular value for southeastern Florida were sent in from the Allison V. Armour expedition and are recorded under Nos. 75270 to 75285.

An interesting collection of native types and varieties of peaches and apricots (75228 to 75238) were sent in from Persia, and a smaller group of mangos (75264 to 75269) from Honolulu may add valuable new fruits for several localized areas in our country.

Interest in rubber-producing plants is noted—three importations of Cryptostegia (75218, 75219, 75752), latex-producing shrubby vines which seem to promise well in southern Florida.

The increasing interest in bamboos is reflected in the collection (Nos. 75146 to 75170) sent in by Dr. A. W. Hill, Director of the Royal Botanic Gardens, Kew, England, for study in regard to hardiness and suitability for use in ornamental and commercial plantings in the warmer parts of the country.

Of more isolated interest, one finds a gladiolus (No. 75657) sent in from South America, where it was collected apparently in the wild, a new location for this genus.

Large collections from the Melbourne Botanic Garden, Victoria (Nos. 75534 to 75574), and the Sydney Botanic Gardens, New South Wales (Nos. 75576 to 75612), are rich in both Acacia and Eucalyptus, genera of great value and importance in California and the Southwest. Many of these are species or horticultural forms not previously introduced into this country.

Even from so brief an outline as this, it is possible to see how diverse are the materials that are brought in by this office. It is impossible to suggest at this time the specific reasons for which they were secured or to indicate the disposition that has been made in each case, but the reader is urged once more to recall that the activities recorded here are all related to problems under consideration by the department and do not represent a check list of materials for distribution.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., June 5, 1929.

INVENTORY[1]

75127 to 75136.

From Derbent, Daghestan, Caucasus, Russia. Seeds presented by W. Berg, Director of the Daghestan Agricultural Plant-Breeding Station. Received November 17, 1927.

75127 to 75129. AVENA SATIVA L. Poaceae. **Oats.**

75127. From Andi District, Gadsberi. A variety growing at an altitude of 150 meters.

75128. From Darghin District, Ulal.

75129. From Ossetia, Digor District, Dushta.

75130. HORDEUM VULGARE NIGRUM (Willd.) Beaven. Poaceae. **Six-rowed barley.**

A mass selection.

75127 to 75136—Continued.

75131. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

A mass selection.

75132 to 75134. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

75132. *Kara kilchik.*

75133. *Giur ghimi.*

75134. *Baku cugda.*

75135 and 75136. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

75135. *Ak cugda.*

75136. *Narghia ava.*

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

75137. MENTHA ARVENSIS PIPERASCENS Malinv. Menthaceae. **Japanese mint.**

From Japan. Plants obtained through the Federal Horticultural Board. Received October 17, 1927.

A cultivated variety with larger leaves and yielding more oil than the ordinary mint.

75138. JUGLANS SIEBOLDIANA Maxim. Juglandaceae. **Japanese walnut.**

From Sapporo, Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received November 12, 1927.

No. 16. Collected at the botanic garden, Hokkaido Imperial University. A broad-headed Japanese tree up to 50 feet high which bears its ovoid nuts in long racemes often containing 20 nuts.

75139. BAMBUSA ARUNDINACEA Retz. Poaceae. **Bamboo.**

From Dehra Dun, India. Seeds presented by R. N. Parker, forest botanist of the Forest Research Institute. Received November 18, 1927.

A tall bamboo, native to India, rising to a height of 60 feet. The stems are produced in dense clumps, green and shining when young, but becoming golden. The lower branches are spiny.

75140 to 75143. FRAGARIA spp. Rosaceae. **Strawberry.**

From Berlin, Germany. Plants purchased from L. Späth. Received December 28, 1925. Numbered November, 1927.

75140. FRAGARIA sp.

Kaisers sämling. Fruits large, bright red; flesh sweet and melting; a heavy yielder.

75141. FRAGARIA sp.

Lucida perfecta. Late-ripening variety; fruits large; flesh white, sweet, with an aromatic flavor; a heavy yielder.

75142. FRAGARIA sp.

Sieger. Early ripening variety; fruits large, bright red, juicy, of excellent flavor; a heavy yielder.

75143. FRAGARIA sp.

Späte von Leopoldshall. Fruits large, bright red; flesh dark red.

75144. FRAGARIA sp. Rosaceae. **Strawberry.**

From Bedford, England. Plants purchased from Laxton Bros. Received March 25, 1926. Numbered November, 1927.

Grove End scarlet. An old and well-known, midseason variety with small round fruits which remain whole when preserved.

75145. RUBUS sp. Rosaceae. **Raspberry.**

From Shitoukhetsy, Manchuria. Plants collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received November 17, 1926. Numbered November, 1927.

No. 7267. October 8, 1926. A wild Manchurian raspberry cultivated for its abundance of red berries, which are of good size and quality.

75146 to 75170.

From Kew, England. Plants presented by Dr. A. W. Hill, Director of the Royal Botanic Gardens. Received May 11, 1925. Numbered December, 1927.

75146 to 75170—Continued.

75146 to 75152. ARUNDINARIA spp. Poaceae. **Bamboo.**

75146. ARUNDINARIA FASTUOSA (Marl.) Makino.

A slender hollow-stemmed Japanese bamboo about 20 feet high. The dark-green stems have purple markings.

For previous introduction see No. 73957.

75147. ARUNDINARIA HINDSII GRAMINEA Mitf.

A very handsome and hardy Japanese bamboo with slender stems 10 to 15 feet high and very narrow leaves 6 to 10 inches long.

75148. ARUNDINARIA MACROSPERMA Michx. **Cane reed.**

A native American bamboo growing along streams in the southeastern part of the United States. The stems are 20 to 30 feet high with numerous short divergent branches and lanceolate leaves 10 to 15 inches long.

75149. ARUNDINARIA NAGASHIMA (Marl.) Aschers. and Graebn.

A small Japanese bamboo 3 to 5 feet high, with erect stems, upright branches, and linear leaves 6 to 9 inches long. The nodes are covered with white wax.

75150. ARUNDINARIA NITIDA Mitf.

A hollow Chinese bamboo up to 20 feet high, with the stems leafless the first year and branching and arching the second year. The pubescent sheaths are purplish, and the small lanceolate leaves are bright green above and glaucescent beneath. This is one of the hardiest of the Arundinarias and thrives in moist shady places.

75151. ARUNDINARIA SIMONII (Carr.) A. and C. Riviere.

A hollow bamboo, native to China and Japan, with stems 25 feet high and an inch thick, young sheaths purplish, and leaves 6 to 12 inches long which are bright green above, often striped with white, and glaucescent beneath on one side of the midrib and nearly green on the other side.

75152. ARUNDINARIA SIMONII VARIEGATA Hook. f.

A form of *Arundinaria simonii* with smaller and narrower leaves which are irregularly striped with white.

75153 to 75160. PHYLLOSTACHYS spp. **Bamboo.**

75153. PHYLLOSTACHYS AUREA Carr. **Golden Japanese bamboo.**

A yellow-stemmed bamboo, native to China and Japan, with erect stems 15 to 18 feet high and an inch thick, and with dark-green leaves 4 to 6 inches long and nearly an inch wide.

75154. PHYLLOSTACHYS BAMBUSOIDES Sieb. and Zucc.

A Chinese bamboo with stems over 50 feet high and 4 to 6 inches in diameter, bright green with a bloom below the nodes, and the sheaths mottled with purple.

75155. PHYLLOSTACHYS BAMBUSOIDES CASTILLONI (Marl.) H. de Lehaie.

A smaller and more slender Japanese form of *Phyllostachys bambusoides* with yellow stems striped with green and the shorter and narrower leaves often striped with pale yellow.

75146 to 75170—Continued.

75156. PHYLLOSTACHYS FLEXUOSA A. and C. Riviere.

A Chinese bamboo 10 to 20 feet high, with stems bright green at first, but becoming almost black, long flexuous branches, and leaves dark green above and glaucous beneath.

75157. PHYLLOSTACHYS KUMASASA (Zoll.) Munro.

A small Japanese bamboo with flattened zigzag green stems 4 to 8 feet high, two to four branchlets at each node, and ovate-lanceolate dark-green leaves.

75158. PHYLLOSTACHYS PUBERULA (Miquel) Munro.

A Chinese bamboo with bright-green hollow stems 15 to 20 feet high, arching and very leafy; the leaves are dark green above and glaucous beneath.

75159. PHYLLOSTACHYS PUBERULA NIGRA (Lodd.) H. de LeHaie.

A form of *Phyllostachys puberula* with the stems soon turning black, the nodes edged below with white, and the branchlets spotted.

75160. PHYLLOSTACHYS VIRIDI-GLAUCESCENS A. and C. Riviere.

A Chinese bamboo with yellowish green hollow stems, 20 to 24 feet high, purplish at the nodes and the sheaths striped with purple.

75161 to 75170. SASA spp. Poaceae. **Bamboo.**

75161. SASA AURICOMA (Mitf.) E. G. Camus.

A dwarf Japanese bamboo 3 to 5 feet high, with slender dark purplish green tufted stems and green and golden yellow striped leaves.

75162. SASA CHRYSANTHA (Mitf.) E. G. Camus.

A spreading Japanese bamboo with hollow stems 5 to 7 feet high and glabrous bright-green leaves often variegated with yellow.

75163. SASA DISTICHA (Mitf.) E. G. Camus.

A dwarf Japanese bamboo with zigzag hollow green stems less than 3 feet high, and bright-green leaves arranged in two rows.

75164. SASA HUMILIS (Mitf.) E. G. Camus.

A dwarf Japanese bamboo with very slender green stems 2 to 4 feet high, having two or three long branches at each node, purplish sheaths, and pale-green leaves.

75165. SASA JAPONICA (Sieb. and Zucc.) Makino.

A Japanese bamboo with stout stems 10 to 15 feet high, having pale-brown sheaths and leaves 4 to 10 inches long, lustrous dark green above and glaucescent beneath except a green strip on one margin.

75166. SASA PUMILA (Mitf.) E. G. Camus.

A Japanese dwarf bamboo 1 to 2 feet high, with slender hollow stems, purple-tinged sheaths, and bright-green slightly hairy leaves.

75167. SASA TESSELLATA (Munro.) Mak. and Shib.

A dwarf Japanese bamboo 3 to 5 feet high, with arching stems, very striking on account of the large leaves forming broad rounded masses.

75168. SASA VARIEGATA (Siebold) E. G. Camus.

A Japanese dwarf bamboo 2 to 3 feet high, spreading rapidly and forming large tufts of very slender somewhat zigzag stems with green leaves striped with white.

75146 to 75170—Continued.

75169 and 75170. SASA VEITCHII (Carr.) Rehder.

A rapidly spreading dwarf Japanese bamboo usually 2 feet high, but rarely 5 feet, with green stems and leaves dark green above, glaucous beneath, and turning yellow on the margin in autumn.

75169. No. 1. 75170. No. 2.

75171. BETA VULGARIS L. Chenopodiaceae. **Beet.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received November 29, 1927.

Française riche. This variety gives a very large yield in deep, rather light soil.

75172. PASSIFLORA MALIFORMIS L. Passifloraceae.

From Calarca, Colombia. Seeds presented by Eduardo Hernandez, Direccion de Agricultura. Received November 25, 1927.

A locally grown variety.

For previous introduction see No. 55028.

75173 and 75174. ZEA MAYS L. Poaceae. **Corn.**

From Angol, Chile. Seeds presented by D. S. Bullock, of the Instituto Agricola Bunster. Received November 21, 1927.

Maiz Indiana. Collected in the Andes at Palugin, near Pucon.

75173. No. 1. 75174. No. 2.

75175 to 75181. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Tanganyika Territory, Africa. Seeds presented by T. H. Marshall, Department of Agriculture, Dar es Salaam. Received November 15, 1927.

75175. *Bonombo.* A variety with red flowers and large soft white to pinkish seeds.

75176. *Bonongwa.* A variety with white flowers and small hard white to pinkish seeds.

75177. *Kipera.* A yellow-flowered variety with small hard pinkish to greenish seeds.

75178. *Kiswaswa.* A red-flowered variety with soft medium-sized purple-spotted seeds.

75179. *Mkulyungu.* A black-flowered variety with medium-sized hard purple seeds.

75180. *Mrugulu.* A variety with mottled flowers and medium-sized hard fawn-colored seeds.

75181. *Mtoteke.* A black-flowered variety with medium-sized hard brownish seeds.

75182. DIOSPYROS CONZATTII Standley. Diospyraceae. **Persimmon.**

From Oaxaca de Juarez, Oaxaca, Mexico. Seeds presented by Dr. C. Conzatti. Received November 14, 1927.

A subtropical tree of particular interest on account of the exquisite flavor of its edible, green-skinned fruits, 4 centimeters in diameter and 2 centimeters long. Propagation of this magnificent tree is relatively simple because of its vigor and the altitude at which it thrives, 1,000 meters above sea level. Native to south-central Mexico.

For previous introduction see No. 53176.

75183 to 75199. PRUNUS CERASUS MARASCA (Host.) C. Schneid. Amygdalaceae. **Maraschino cherry.**

From Milan, Italy. Plants purchased from Fratelli Ingegnoli. Received December 4, 1927.

Local varieties.

75183. *Bicentenaria.*

75184. *Inglese precoce.*

75185. *Nera grossa di Piemonte.*

75186. *Regina ortensia.*

75187. *Rossa grossa di Piemonte.*

75188. *Bella di Barbanti.*

75189. *Bella di Toscana.*

75190. *Bianco grosso.*

75191. *Bianco rosato di Piemonte.*

75192. *Garibaldi.*

75193. *Giallo di Doenissen.*

75194. *Morreau.*

75195. *Napotitana.*

75196. *Nero di Tarcento.*

75197. *Nero di Winkler.*

75198. *Olivo.*

75199. *Citirgio duracino gigante.*

75200. EHRHARTA CALYCINA J. E. Smith. Poaceae. **Perennial African veldt grass.**

From Burringbar, New South Wales, Australia. Seeds presented by B. Harrison. Received October 8, 1927.

A grass 4 feet high, which is popular as a forage grass in Western Australia, where it was introduced accidentally by camel owners in fodder imported from South Africa. It is said to be very nutritious.

75201. LUCUMA NERVOSA DC. Sapotaceae. **Canistel.**

From Homestead, Fla. Seeds presented by Dr. J. Petersen. Received October 8, 1927.

A small tree up to 25 feet high, with spreading branches and oblong leaves 4 to 8 inches long. The ovoid orange-yellow edible fruits are 2 to 4 inches long with soft mealy bright orange flesh of rich sweet flavor. The tree is native to northern South America.

75202 and 75203. NOTHOFAGUS spp. Fagaceae.

From Wellington, New Zealand. Seeds presented by L. Ellis, Director of the Department of Forestry. Received October 8, 1927.

75202. NOTHOFAGUS FUSCA (Hook. f.) Oerst. **Dusky beech.**

A large New Zealand tree often reaching a height of 100 feet and having a trunk diameter of 12 feet. It is sparsely distributed throughout the islands in damp situations.

For previous introduction see No. 46643.

75203. NOTHOFAGUS SOLANDRI (Hook. f.) Oerst. **Solander's beech.**

A forest tree up to 100 feet high, with small leaves less than an inch long and fruits resembling small chestnuts. This is the most abundant of the New Zealand beeches, forming immense forests on the drier mountain slopes.

75204. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Fundo Ursula, near Nancagua, Chile. Seeds presented by H. L. Westover, Bureau of Plant Industry. Received October 11, 1927.

Seeds collected from a waste place, May 7, 1924. The fruits are small, but very solid, and seem to contain less acid than the tomatoes in the United States.

75205 and 75206.

From Gold Coast, Africa. Seeds presented by L. A. King-Church, conservator of forests, Victoriaborg, Akkra. Received October 12, 1927.

75205. MONODORA MYRISTICA (Gaertn.) Dunal. Annonaceae. **Calabash nutmeg.**

The Calabash nutmeg is described in Curtis's Botanical Magazine (plate 3059) as a large, spreading, tropical African tree with shining, pale-green leaves and fragrant flowers. The latter, borne singly in the leaf axils, are about 6 inches across, with six petals; three of these are spreading and yellow, the other three are erect and creamy white, and all are dotted with red. The fruit, 4 to 6 inches in diameter, contains a number of cylindric seeds about an inch long; these have a flavor closely resembling that of the common nutmeg.

For previous introduction see No. 61499.

75206. PARKIA sp. Mimosaceae.

A tall unarmed tree with compound leaves and small, dense panicles of flowers which are followed by large, strap-shaped pods. Native to tropical Africa.

75207 to 75213. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Pusa, Bihar and Orissa, India. Seeds collected by Dr. F. G. Krauss, of the University of Hawaii. Received October 12, 1927.

Locally grown varieties collected in August, 1927.

75207. *Pusa No. 1.*

75208. *Pusa No. 2a.*

75209. *Pusa No. 2b.*

75210. *Pusa No. 4a.*

75211. *Pusa No. 5a.*

75212. *Pusa No. 5b.*

75213. *Amber No. 10.*

75214 to 75216. ZEA MAYS L. Poaceae. **Corn.**

From India. Seeds collected by Dr. F. G. Krauss, of the University of Hawaii. Received October 12, 1927.

Locally grown varieties, collected in August, 1927, at the Agricultural Experiment Station, Pusa, Bihar and Orissa.

75214. No. 1. An early-maturing variety.

75215. No. 2. An intermediate-maturing variety.

75216. No. 3. A late variety.

75217. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Altoona, Pa. Seeds presented by William Hallman. Received October 8, 1927.

A melon originally from China, which is reported to produce as many as 60 fruits to a hill.

75218 and 75219. CRYPTOSTEGIA spp. Asclepiadaceae.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received October 10, 1927.

75218. CRYPTOSTEGIA GRANDIFLORA R. Br. **Palay rubbervine.**

A climbing shrubby vine of unknown nativity, but now cultivated in many places in the Tropics of both hemispheres as an ornamental, and occasionally growing as an escape from cultivation. The leaves are short and leathery, with dull surfaces and purple midribs, and the whitish or pink flowers are 2 to 3 inches in diameter. This vine is now being tested as a source of rubber. In India the plant is called palay.

For previous introduction see No. 61795.

75219. CRYPTOSTEGIA GRANDIFLORA R. Br.

Received as *Cryptostegia madagascariensis*, but plants grown at Chapman Field, near Miami, Fla., appear to be *C. grandiflora*.

75220. ZEA MAYS L. Poaceae. **Corn.**

From Darjiling, India. Seeds collected by Dr. F. G. Krauss, of the University of Hawaii. Received October 12, 1927.

Collected August 10, 1927. A variety growing at an altitude of 7,000 feet.

75221. (Undetermined.)

From Kabiti, near Nairobi, Kenya Colony, East Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received October 15, 1927.

No. 83. July 8, 1927. A bulbous liliaceous plant with flowers about 1 inch in diameter produced on flower stalks 6 feet high. The leaves are thin, 2 to 2½ feet long, and 1½ inches broad at the base, tapering gradually to a point. The pods are one-fourth to one-half inch long, and the bulbs are 4 inches in diameter, with several small bulbs attached to the side.

75222 to 75225. PHOENIX spp. Phoenicaceae. **Palm.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received October 10, 1927.

75222. PHOENIX RUPICOLA T. Anders.

A slender date palm up to 20 feet high, with leaves 10 feet long and oblong shining yellow fruits. Native to India.

75223 and 75224. PHOENIX RECLINATA Jacq. **Senegal date palm.**

A date palm 25 or more feet tall, which has bright-green 2-ranked leaves with rigid leaflets. Native to tropical Africa.

75223. [No data.]

75224. Variety *leonensis*.

75225. PHOENIX ROEBELENII O'Brien. **Roebelin palm.**

A dwarf palm, resembling the date palm, but only about 2 feet high. Native to Cochin China.

75226. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

From Palestine. Bud wood collected by Knowles A. Ryerson, of the Joint Palestine Survey Commission. Received October 5, 1927.

The Jaffa or Shamouti orange from Jaffa, Palestine, is a large oval fruit of bright orange color, maturing from October to April. The fruit is practically seedless, the skin usually thick, and the flesh of excellent quality. This variety is the basis of the rapidly developing Palestine orange industry. Ninety-five per cent of the fruit is marketed in England.

75227. JATROPHA SPATHULATA Muell. Arg. Euphorbiaceae. **Tocote prieto.**

From San Antonio, Tex. Plants collected by Dr. J. N. Rose, of the United States National Museum, and Paul Russell, of the Bureau of Plant Industry. Received October 24, 1927.

No. 24139. October 19, 1927. A stoloniferous shrub up to 15 feet high, with fleshy branches, sessile spathulate leaves, and fascicles of pale-rose flowers. Native to Texas, Mexico, and Central America. For testing as a possible source of rubber.

75228 to 75238.

From Teheran, Persia. Seeds presented by E. S. Haskell, Director General of Agriculture and Public Domains. Received October 17, 1927.

Local varieties collected at Tajrish, near Teheran.

75228 and 75229. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

75228. No. 1. Small mealy fruits.

75229. No. 2. Small sweet fruits.

75230. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. 3. Aromatic fruits.

75231 to 75238. PRUNUS spp. Amygdalaceae. **Plum.**

75231. PRUNUS sp.

No. 4. Large round black fruits.

75232. PRUNUS sp.

No. 5. Large round white fruits.

75233. PRUNUS sp.

No. 6. Large round red fruits.

75234. PRUNUS sp.

No. 7. Very small round yellowish fruits.

75235. PRUNUS sp.

No. 8. Small oval yellowish fruits.

75236. PRUNUS sp.

No. 9. Small oval reddish fruits.

75237. PRUNUS sp.

No. 10. Small oval red fruits.

75238. PRUNUS sp.

No. 11. Large round yellowish white fruits.

75239. (Undetermined.) Poaceae.

From Concepcion, Chile. Seeds presented by S. P. Price, Concepcion, through H. L. Westover, Bureau of Plant Industry. Received October 24, 1927.

A mixture of local grass varieties.

75240. TRIFOLIUM FRAGIFERUM L. Fabaceae. **Strawberry clover.**

From Melbourne, Australia. Seeds purchased from F. H. Brunning. Received October 21, 1927.

The strawberry clover has in some unknown way become introduced into northeastern Oregon, where, on the seepage irrigated lands that are too alkali for alfalfa, it seems to thrive excellently. It seems probable that the seed was originally introduced with alfalfa, but at the present time this variety has escaped into the pastures, wherever the seepage from the irrigation ditches provides sufficient moisture.

75241. CALOPHYLLUM KUNSTLERI King. Clusiaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Agronomist in Charge, Plant Introduction Gardens. Received October 22, 1927.

A tree up to 60 feet high, native to the Malay Peninsula. The 4-angled branchlets are red pubescent, and the elliptical leaves are prominently nerved. The small axillary clusters of white flowers are followed by drupes about one-third of an inch in diameter.

75242 and 75243. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Ispahan, Persia. Seeds presented by A. Mohammed Hossain Guiahi. Received October 25, 1927.

Locally grown varieties.

75242. No. 2. *Kharboozeh*. An oval-shaped variety.

75243. No. 4. *Semsoori*. A round variety.

75244. LOBELIA FULGENS Willd. Campanulaceae. **Mexican lobelia.**

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received October 25, 1927.

A herbaceous perennial plant about 4 feet high with bright-red flowers.

For previous introduction see No. 45353.

75245. GALANTHUS FOSTERI Baker. Amaryllidaceae. **Snowdrop.**

From London, England. Bulbs purchased from Barr & Sons. Received October 28, 1927.

A bulbous, spring-flowering plant native to Asia Minor. The leaves are nearly an inch wide, and the small flowers are white with the lower half of the segments green.

75246. SAGUERUS PINNATUS Wurmb (*Arenga saccharifera* Labill.). Phoenicaceae. **Sugar palm.**

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director of the Bureau of Agriculture. Received December 20, 1927.

Kaong. A handsome palm 30 to 40 feet high, with immense leaves and enormous bunches of fruit. A rich-flavored palm sugar is made from the sap which flows from the bruised fruit stalk. It also furnishes a valuable black fibrous substance, ejoo fiber, superior in quality, cheapness, and durability to that obtained from the husk of the coconut, and renowned for its power to resist moisture. It is used by the natives of the Indian Islands for every purpose of cordage. Underneath this material is found a substance of a soft gossamerlike texture which is imported into China, where it is applied as oakum in calking the seams of ships and more generally as tinder for kindling fire.

For previous introduction see No. 67178.

75247. LILIUM sp. Liliaceae. **Lily.**

From Tokyo, Japan. Bulbs collected by R. K. Beattie, Bureau of Plant Industry. Received October 31, 1927.

No. 1. (*Yuri*.) Obtained in the market, September 30, 1927. A local variety with edible bulbs.

75248. DOLICHOS LABLAB L. Fabaceae. **Hyacinth bean.**

From Cairo, Egypt. Seeds presented by William Carlton McQuiston, of the American University. Received October 29, 1927.

A locally grown variety.

75249. ALEURITES FORDII Hemsl. Euphorbiaceae. **Tung-oil tree.**

From Pineville, La. Seeds presented by Placide Rodriguez, Superintendent of the Alexandria National Cemetery. Received October 17, 1927.

Seeds from trees growing in the Alexandria National Cemetery.

75250. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Brownsville, Tex. Seeds collected by Dr. J. N. Rose, of the United States National Museum, and Paul Russell, of the Bureau of Plant Industry. Received November 12, 1927.

October 30, 1927. A local variety of excellent quality with an unusually hard shell.

75251 to 75253. MACADAMIA TERNIFOLIA F. Muell. Proteaceae. **Macadamia.**

From Sydney, New South Wales, Australia. Seeds purchased from Anderson & Co. Received October 18, 1927.

An evergreen tree up to 50 feet in height, which is cultivated for its edible nuts.

For previous introduction see No. 74219.

75251. The true thin-shelled variety.

75252. Medium thick-shelled variety with smooth leaves.

75253. Thick-shelled variety of the ordinary type.

75254 and 75255. LILIUM spp. Liliaceae. **Lily.**

From Chosen. Obtained through C. H. Stephan, American vice consul in charge, Seoul. Received November 11, 1927.

Seeds and bulbs of a wild pink lily from the Chosen Government-General's Model Farming Station, Suigen, near Seoul. According to that station, the wild lily in Suigen is chiefly of the species of *Lilium concolor buschianum*, and the Japanese name is *Aka hime yuri*.

75254. Bulbs. 75255. Seeds.

75256. CYNOMETRA CAULIFLORA L. Caesalpiniaceae.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Doctors van Leeuwen, director of the botanic gardens. Received February 11, 1927. Numbered October, 1927.

A curious tree producing an abundance of greenish yellow fruits which are the shape of triangular apple tarts. They have an acid flavor with little character, but when cooked are said to make excellent pies. These fruits are produced from knotlike excrescences on the trunk, often near the ground.

For previous introduction see No. 67692.

75257 to 75262.

From Texas and Mexico. Seeds collected by Dr. J. N. Rose, of the United States National Museum, and Paul Russell, of the Bureau of Plant Industry. Received November, 1927.

75257. CHIOCOCCA ALBA (L.) Hitchc. Rubiaceae.

No. 24289. Brownsville, Tex., October 29, 1927. A much-branched climbing shrub with leathery shining, oval leaves about 2 inches long, small, white flowers, and small globular, white berries. Native to Mexico.

75257 to 75262—Continued.

75258. INODES TEXANA O. F. Cook. Phoenicaceae. **Palm.**

No. 24268. Brownsville, Tex., October 28, 1927. A tall erect handsome fan-leaved palm, up to 50 feet in height, native to the banks of the lower Rio Grande below Brownsville, Tex., and Matamoros, Mexico. The trunks of the older trees are smooth, while the persistent leafstalks form a network on the trunks of the younger ones. The leaves are light green, about 5 feet wide, and are borne in a large terminal cluster. While this palm is grown as an ornamental in this vicinity, it is not cultivated elsewhere. The edible fruits are round, fleshy, black and about five-eighths of an inch in diameter. They are sold in the Matamoros market under the name of micharo.

For previous introduction see No. 42280.

75259. IPOMOEA FISTULOSA Mart. Convolvulaceae. **Morning-glory.**

No. 24228. Brownsville, Tex., October 26, 1927. A shrubby subtropical morning-glory up to 15 feet high, with rather thick entire leaves about 5 inches long and handsome purplish flowers about 3 inches long. Native to Brazil.

For previous introduction see No. 46966.

75260. KARWINSKIA HUMBOLDTIANA (Roem. and Schult.) Zucc. Rhamnaceae.

No. 24201. Near Brownsville, Tex., October 24, 1927. A small, attractive tree 22 feet high, with oblong-oval opposite leaves up to 3 inches long and small round black berries. It is found in dry situations between southern Texas and Central America.

75261. PITHECOLOBIUM BREVIFOLIUM Benth. Mimosaceae.

No. 24217. October 25, 1927. Near Matamoros, Mexico. An ornamental evergreen shrub or small tree about 18 feet high, found in semiarid situations. It has short spines, pinnate leaves, and pale cream-colored flowers in headlike spikes. The Mexican name is tanasa.

75262. SAPIUM SEBIFERUM Roxb. (L.) Euphorbiaceae. **Chinese tallowtree.**

No. 24198. Brownsville, Tex., October 28, 1927. An attractive tree, native to China, which is long-lived, and at maturity has a height of 40 to 50 feet and a diameter of 5 to 6 feet. The 3-celled, flattened-ovoid fruits are about three-fifths of an inch in diameter. When ripe they are blackish brown and woody in appearance; in China these are either gathered by hand or knocked down by poles. After being collected, the fruits are spread in the sun, where they open, and each liberates three elliptical seeds covered with a white substance which is a fat or tallow. After this substance has been removed by steaming and rubbing through a bamboo sieve, the fat is collected and melted, molded into cakes, and sold as the Pi yu of commerce. After the fat is removed the seeds are crushed, and the oil expressed from them is called Ting yu. In China the oil and tallow are used in the manufacture of candles, and these products are also exported in quantity to Europe, where they are used in the manufacture of soap. The tree is occasionally grown as a shade tree in the Gulf and South Atlantic States.

For previous introduction see No. 51897.

75263. GARCINIA sp. Clusiaceae.

From near Lungnam, Kiangsi Province, China. Seeds collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received February 24, 1927. Numbered in October, 1927.

No. 973. *Chuk tsz, shaan chuk.* December 19, 1926. This species, said to be wild, will probably be of interest as a cold-resistant stock on which to graft the commercial mangosteen.

75264 to 75269. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Honolulu, Hawaii. Plants presented by W. T. Pope, horticulturist of the Hawaii Agricultural Experiment Station. Received November 11, 1927.

Locally grown varieties.

75264. No. 2946. *Pirie.*

75265. No. 3715. *Cowasjee patel* × *pirie.*

75266. No. 4800. *Kalihi.*

75267. No. 4802. *Victoria.*

75268. No. 5298. *Ludwig.*

75269. No. 5299. *Ono.*

75270 to 75285.

From West Africa. Seeds and plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March and April, 1927. Numbered in October, 1927.

75270. BROWNEA COCCINEA Jacq. Caesalpiniaceae.

No. 1170. Victoria Botanic Garden, Cameroon, February 10, 1927. An ornamental tropical tree with pale-brown leaves and large heads of scarlet flowers.

75271. CYRTOSPERMA SENEGALENSE (Schott) Engler. Araceae.

No. 1156. Collected near Duala, Cameroon, February 6, 1927. A curious aroid which sends up its spathe on a spiny stem 10 feet high. The spathe itself is 16 inches long. This plant requires sandy wet soil, tropical conditions and moist atmosphere.

75272. DIOSCOREA sp. Dioscoreaceae. **Yam.**

No. 1143. Growing in the jungle at Jala, Sierra Leone, January 21, 1927. A wild species which may be valuable as an edible yam.

75273. DIOSCOREA sp. Dioscoreaceae. **Yam.**

No. 1149. A wild yam from Abuko, Gambia, January 10, 1927.

75274. GARCINIA sp. Clusiaceae.

No. 1102. Konakry, French Guinea, January 15, 1927. A small tropical African tree with typical Garcinia leaves and white flowers half an inch in diameter. The yellow fruits, an inch in diameter, contain very large seeds surrounded by a thin layer of yellow flesh which is sweet and palatable, though rather dry.

75275. GARCINIA sp. Clusiaceae.

No. 1102. Konakry, French Guinea. Seedlings of the same species as No. 75274.

75276. GARCINIA sp. Clusiaceae.

No. 1164. Botanic Garden, Victoria, Cameroon, February 10, 1927. An East Indian species producing ribbed obovate fruits which have eight grooves, and a distinct mammillate protuberance on which is placed the stigma. The arillus of the seeds is salmon pink, somewhat like the outside of the fruit. When ripe, the rind softens up like a small melon.

75277. ISOLONA LEONENSIS Sprague and Hutchins. Annonaceae.

No. 1215. From the jungle near the road between Akkra and Winneba, Gold Coast, March 27, 1927. A small tropical tree which may be of value as stock for the Annonas. The fruits are about the size of a small North American pawpaw, greenish yellow with small white dots and black longitudinal stripes. The seeds are very abundant and the fruit pulp is scanty.

75270 to 75285—Continued.

75278. LANDOLPHIA STOLZII Busse. Apocynaceae.

No. 1181. Obtained in the market at Moliko, near Buea, Cameroon, February 12, 1927. A tropical climbing shrub producing large pear-shaped fruits 4 inches in diameter and of a rusty orange-brown color, with rough protruding lenticels. The flesh is composed of a fibrous arillus of a light-brown color and pleasant acid taste with perhaps a slight acridity. This vine may prove useful as a source of rubber.

For previous introduction see No. 63773.

75279. LISSOCHILUS HEUDELOTII Reichenb. f. Orchidaceae.

No. 1231. Near Akkra, Gold Coast, February 27, 1927. An ornamental terrestrial orchid bearing flesh-colored flowers with a purple-spotted lip, on scapes up to 4½ feet high, and strings of tubers as large as potatoes.

75280. LISSOCHILUS MILLSONI Rolfe. Orchidaceae.

No. 1232. Between Akkra and Winneba, Gold Coast, February 27, 1927. A terrestrial herbaceous tropical orchid similar to No. 1231 [No. 75279], but not so attractive.

75281. MONODORA MYRISTICA (Gaertn.) Dunal. Annonaceae.

No. 1242. Agricultural Experiment Station, Aburi, Gold Coast, February 26, 1927. A handsome tropical evergreen tree bearing an abundance of large fragrant yellow and white flowers. These flowers are followed by large fruits containing many oily seeds which are aromatic and used as a condiment by the natives of West Africa.

For previous introduction see No. 61499.

75282. MUSA ARNOLDIANA Wildem. Musaceae.

No. 1239. Victoria, Cameroon, February 17, 1927. A tropical banana relative about 12 feet high with leaves 7 feet long and fruits 4 inches long.

For previous introduction see No. 55101.

75283. SYNSEPALUM DULCIFICUM (Schum.) Daniell. Sapotaceae.

No. 1173. Agricultural Experiment Station, Assuansi, Gold Coast. An ornamental tropical African shrub about 6 feet high, with dark-red fruits which, when eaten, make sour things taste sweet.

For previous introduction see No. 73071.

75284. BUTIA CAPITATA PULPOSA (Barb.-Rodr.) Beccari.

No. 1200. Botanic Garden, Victoria, Cameroon. An ornamental palm.

75285. (Undetermined.)

No. 1220. From the jungle between Winneba and Assuansi, Gold Coast, February 28, 1927. A tropical herbaceous plant with large ovate leaves 10 inches long, which are a delicate crimson on the under side. The flowers are also attractive though rather small.

75286 to 75403.

From East Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received October, 1927.

75286. ABUTILON sp. Malvaceae.

No. 49. Near Nairobi, Kenya Colony, July 3, 1927. A tropical shrub 3 feet or more high, with purple pubescence on the upper part of the stems. The leaves are thin, broad, and heart-shaped, the flowers yellow to orange, and the sharply pointed pods are in clusters an inch across.

75286 to 75403—Continued.

75287. ANDROPOGON PERTUSUS (L.) Willd. Poaceae. **Grass.**

No. 216. Scott Agricultural Laboratory, Kenya Colony. A perennial grass with hairy nodes, which grows abundantly on the Athi Plains and is commonly found in the Kinangop and Aberdares Mountains up to 9,000 feet altitude. It appears leafy and productive, and spreads by its strong rhizomes. As the seeds shatter when ripe, this grass may be rather difficult to harvest.

For previous introduction see No. 49510.

75288. ANDROPOGON sp. Poaceae. **Grass.**

No. 89. July 10, 1927. An important grass growing on the plains between the Athi River and Nairobi, Kenya Colony.

75289. ANDROPOGON sp. Poaceae. **Grass.**

No. 152. July 27, 1927. A perennial grass growing in wet meadows near Uplands, Kenya Colony.

75290. ASTREBLA sp. Poaceae. **Grass.**

No. 202. Scott Agricultural Laboratory, Kenya Colony. A bunch grass introduced from Australia by the Scott Agricultural Laboratory.

75291. AVENA BYZANTINA Koch. Poaceae. **Oats.**

No. 277. *Boer.* A local variety from Southern Rhodesia.

75292. AVENA SATIVA L. Poaceae. **Oats.**

No. 278. *Ruakur.* A local variety from Southern Rhodesia.

75293. BRACHIARIA BRIZANTHA (Hochst.) Stapf. Poaceae. **Grass.**

No. 209. Scott Agricultural Laboratory, Kenya Colony. A rather uncommon big leafy grass, resembling a large Paspalum, which seeds rather sparingly and shatters badly. The seed heads are sticky. It is apparently a fine grass for the hills.

For previous introduction see No. 50687.

75294 to 75300. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

Local varieties.

75294. No. 233. Arusha District, Tanganyika Territory.

75295. No. 234. Moshi District, Tanganyika Territory.

75296. No. 235. A variety grown by the Wakabe tribe, Northern Province, Arusha District, Tanganyika.

75297. No. 237. Tanga District, Tanganyika Territory.

75298. No. 254. From the Government plantation, Serere, Eastern Province, Uganda.

75299. No. 255. From the Government plantation, Serere, Eastern Province, Uganda.

75300. No. 256. From the Government plan tation, Serere, Eastern Province, Uganda.

75301. CALAMAGROSTIS sp. Poaceae. **Grass.**

No. 230. Kinangop Plains, Kenya Colony. A rare perennial grass with a Poalike head.

75302. CANAVALIA ENSIFORMIS (L.) DC. Fabaceae. **Jack bean.**

No. 266. From the Government plantation, Serere, Eastern Province, Uganda.

75286 to 75403—Continued.

75303. CASSIA sp. Caesalpiniaceae.

No. 80. Kabiti, near Nairobi, Kenya Colony, July 8, 1927. A tropical shrubby legume 3 to 4 feet high with six to eight smooth sharp-pointed leaflets 2 to 3 inches long, orange flowers, and thin pods 3 to 4 inches long.

75304. CHAETOCHLOA AUREA (Hochst.) Hitchc. Poaceae. **Grass.**

No. 208. Scott Agricultural Laboratory and vicinity, Kenya Colony. A common grass 5 feet high, eaten by cattle and game animals. It produces an abundance of seeds and retains them better than most African grasses.

For previous introduction see No. 51336.

75305 and 75306. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

Local varieties from Southern Rhodesia.

75305. No. 282. *Red Manna.*

75306. No. 283. *Boer Manna.*

75307. CHAETOCHLOA SULCATA (Aubl.) Hitchc. Poaceae. **Grass.**

No. 218. Scott Agricultural Laboratory and vicinity, Kenya Colony. A broad-leaved, rather brittle grass, with prominent leaf-veins, much relished by cattle. It occurs chiefly in cool, moist, shady places or at an altitude of 6,000 feet or more. The seed habits are good except that birds are very fond of the seeds and strip the plants rather badly.

For previous introduction see No. 62903.

75308. CHLORIS GAYANA Kunth. Poaceae. **Rhodes grass.**

No. 88. A grass growing on the plains between the Athi River and Nairobi, Kenya Colony, July 10, 1927. A perennial grass, native to South Africa, first cultivated by Cecil Rhodes in South Africa about 1895. It is fine stemmed, very leafy, and about 3 feet high. The flowering head consists of a cluster of 10 to 15 long spreading spikes, and the seeds are produced abundantly. The grass also spreads by running branches, 3 to 6 feet long, which root at every node. On fertile land in central and southern Florida six to seven cuttings are secured in a single season. A good stand will yield from 1¼ to 1½ tons of hay to a cutting. This hay is of very fine quality and is eagerly eaten by horses and cows.

For previous introduction see No. 47104.

75309 and 75310. CICER ARIETINUM L. Fabaceae. **Chickpea.**

From Southern Rhodesia.

75309. No. 279. A large-seeded variety.

75310. No. 280. A white-seeded variety.

75311. CROTALARIA SPECTABILIS Roth. Fabaceae.

No. 73. July 8, 1927, Kenya Colony. A plant 4 to 6 feet high, growing at Kabiti, near Nairobi. The upper stems, petioles, and pods are covered with a brown pubescence. The flowers, an inch in diameter, are yellow with brown markings. There are three leaflets which are darker above and whitish pubescent beneath. The pods, 2 to 2½ inches long, are subtended by a large loose, 5-parted calyx.

75312. CUCUMIS sp. Cucurbitaceae.

No. 94. July 10, 1927, Kenya Colony. A herbaceous vine growing on the dry plains or clearings between the Athi River and Nairobi.

75286 to 75403—Continued.

75313. CYMBOPOGON AFRONARDUS Stapf. Poaceae. **Grass.**

No. 126. July 20, 1927. A variety common on the better land of the plains or on clearings between Kabiti and Juja, Kenya Colony, but not frequent on the driest part of the plains. It is a tall, compactly tufted, perennial grass with very narrow leaves about 2 feet long and flowers in interrupted, oblong panicles.

75314. DIGITARIA sp. Poaceae. **Grass.**

No. 231. July 12, 1927. This species is very widespread on the Athi Plains, Kenya Colony, judging from the abundance of old roots. At this season, however, the aboveground parts are extremely rare.

75315. DOLICHOS LABLAB L. Fabaceae. **Hyacinth bean.**

No. 288. Southern Rhodesia. A. E. S. white-seeded variety.

75316. ECHINOCHLOA PYRAMIDALIS (Lam.) Hitchc. and Chase. Poaceae. **Grass.**

No. 219. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A widely scattered but not uncommon grass, appearing usually in moist places in the highlands. It is leafy, productive, and a heavy seed bearer, retaining its seeds well. It is rather promising for locations with 20 inches or more of rainfall, but is not known to withstand frost.

For previous introduction see No. 54343.

75317. EHRHARTA sp. Poaceae. **Grass.**

No. 224. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A perennial, panicum-like grass.

75318. ELEUSINE CORACANA (L.) Gaertn. Poaceae. **Ragi.**

No. 289. *Rapoko.* A grass with milletlike seeds from Southern Rhodesia.

75319. ELEUSINE FLOCCIFOLIA (Forsk.) Spreng. Poaceae. **Grass.**

No. 217. Uplands, Kenya Colony. Large patches of almost pure Eleusine occur throughout the highlands, especially on the Kinangop Plains and the slopes of the Aberdares. Although considered a weed in America, it is said here to provide a good deal of dry-season grazing. It grows 2 feet high and is stiff and harsh to the touch.

75320 and 75321. ELICHRYSUM sp. Asteraceae. **Strawflower.**

75320. No. 114. Strawflower growing in the clearings above Kiambu, Kenya Colony, July 15, 1927.

75321. No. 164. Camp Gusiru, July 29, 1927. White strawflowers common in grasslands above an altitude of 9,000 feet.

75322. ERAGROSTIS sp. Poaceae. **Grass.**

No. 118. Near Nairobi, Kenya Colony, July 16, 1927. An important grass on the dry Athi Plains. It is found with *Themeda triandra* and Setaria.

75323. ERAGROSTIS sp. Poaceae. **Grass.**

No. 221. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A handsome grass when in flower, but not suited for forage, rather frequently seen on the border of the Athi Plains. It is not known to the natives and the Europeans.

75286 to 75403—Continued.

75324. ERLANGEA CORDIFOLIA (Benth.) S. Moore. Asteraceae.

No. 79. Kabiti, near Nairobi, Kenya Colony, July 8, 1927. A tropical herbaceous plant with an abundance of deep-purple, tubular-shaped flowers in heads. The stems are purple at the base and light green at the top, and are finely pubescent. The alternate leaves have a soft white pubescence beneath.

75325. FESTUCA sp. Poaceae. **Grass.**

No. 175. July 31, 1927. A grass frequent on the Kinangop Plains, just below the Kinangop Forest Station, Kenya Colony.

75326. FESTUCA sp. Poaceae. **Grass.**

No. 229. A rare grass of good forage habit, growing at Uplands, Kenya Colony, July 26, 1927.

75327. GLADIOLUS sp. Iridaceae.

No. 161. July 28, 1927. Bulblets of a red herbaceous perennial found in a cedar forest above the Kinangop Forest Station. This gladiolus frequently grows at an altitude of 10,000 feet. It is possibly a common and well-known species, but is said to be strictly confined to the higher altitudes in the Aberdares and in West Kenya (Mount Kenya).

75328. GUIZOTIA ABYSSINICA (L. f.) Cass. Asteraceae.

No. 281. Southern Rhodesia. An annual plant, 6 to 8 feet high, with showy yellow flower heads. The black, shining seeds furnish the Niger oil of commerce.

For previous introduction see No. 58471.

75329. HARPACHNE SCHIMPERI Hochst. Poaceae. **Grass.**

No. 86. A stout annual grass found on hillsides and parched shallow soil between Kabiti and Kikuyu, near Nairobi, Kenya Colony, July 9, 1927. It has cespitose stems up to a foot high, and narrow leaves up to 6 inches long. The lax, secund spikes are from 1 to 3 inches long.

For previous introduction see No. 51594.

75330 and 75331. HELIANTHUS ANNUUS L. Asteraceae. **Sunflower.**

From Southern Rhodesia.

75330. No. 275. **75331.** No. 276.

75332. HIBISCUS sp. Malvaceae.

No. 42. July 2, 1927. A yellow-flowered, tropical shrub, 3 to 4 feet high, found near Nairobi, Kenya Colony.

75333 to 75335. HYPARRHENIA spp. Poaceae. **Grass.**

75333. HYPARRHENIA sp.

No. 70. Near Nairobi, Kenya Colony, July 4, 1927. A bunch grass, 3 to 5 feet high, with harsh bluish leaves.

75334. HYPARRHENIA sp.

No. 160. July 27, 1927. An oatlike grass found on the Kinangop Plains, Kenya Colony.

75335. HYPARRHENIA sp.

No. 225. Near Scott Agricultural Laboratory, Kenya Colony. One of the most common grasses in the old fields of the Kikuyu Reserve, near Nairobi, Kenya Colony. It is always part of the general mixture of grasses and is never seen in pure stand.

75336. LATHYRUS SATIVUS L. Fabaceae. **Bitter vetch.**

No. 274. Southern Rhodesia. *Wedge.*

75286 to 75403—Continued.

75337. LEPTOCHLOA OBTUSIFLORA Hochst. Poaceae. **Grass.**

No. 215. Scott Agricultural Laboratory, Kenya Colony. A handsome grass of medium height, quite common on the plains, though not indigenous. In the region of Nairobi it is not leafy enough for good forage.

75338 and 75339. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From Southern Rhodesia.

75338. No. 284. A small-seeded variety.

75339. No. 285. A large-seeded variety.

75340. MOMORDICA sp. Cucurbitaceae.

No. 74. A tendril-bearing vine found at Kabiti, near Nairobi, Kenya Colony, July 8, 1927. There are five serrate sharp-pointed leaflets, about 2 inches long, covered with soft, thin pubescence. The middle leaflet is larger and the two inner ones small, and the midrib is at one side. The ovoid fruits, 2 to 4 inches long, have angular ridges the entire length, and the thick soft pulpy outer flesh is pink to orange. The seeds, with black and white markings, are enveloped in the red inner flesh.

75341. MOMORDICA sp. Cucurbitaceae.

No. 101. Region of Kabiti, near Nairobi, Kenya Colony, July 11, 1927. A tendril-bearing vine with simple, heart-shaped, serrat leaves. The fruits, tinged with orange, are covered with dense soft spines, and the seeds are enveloped in the red pulp, as are those of No. 74 [No. 75340].

75342. ORYZA SATIVA L. Poaceae. **Rice.**

No. 286. From Southern Rhodesia. *Wataribune.*

75343. PASPALUM SCROBICULATUM L. Poaceae. **Grass.**

No. 210. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A creeping grass, forming a heavy mat, which is very resistant to drought, though no more so than *Paspalum notatum* and *P. dilatatum*. It does not occur in the grazing areas and only sparingly in the bush. This variety seeds well, but the seed heads are mixed with the foliage, making the harvesting difficult.

For previous introduction see No. 56789.

75344. PASSIFLORA EDULIS Sims. Passifloraceae. **Purple granadilla.**

From Lemora, Kenya Colony. A locally grown variety.

75345 to 75348. PENNISETUM spp. Poaceae. **Grass.**

75345. PENNISETUM CILIARE (L.) Link (*P. cenchroides* Rich.).

No. 212. Scott Agricultural Laboratory, Nairobi, Kenya Colony. Originally from a dry region near Archeis Station, in the arid Northern Frontier Province. A very promising grass for semiarid places. At Nairobi it produces a fine leafy growth of excellent forage appearance. There is an abundance of seeds in heads resembling those of crimson clover when ripe. The seeds strip easily while the remainder of the plant is still green.

For previous introduction see No. 51648.

75346. PENNISETUM sp.

No. 176. A grass abundant on the plains near the Kinangop Forest Station, Kenya Colony, July 31, 1927.

75286 to 75403—Continued.

75347. PENNISETUM sp.

No. 211. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A tall bunch grass, very resistant to drought, which is indigenous above Nairobi, but not in the grazing areas. It is harsh in texture and not used for forage, but makes excellent thatch which lasts for years. The grass is planted in rows to divide the shambas (fields or farms).

75348. PENNISETUM sp.

No. 214. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A prostrate grass which seeds sparingly, found in marshy places at Uplands, Kenya Colony. The stems are red and 4 to 6 feet long.

75349. PHALARIS ARUNDINACEA L. Poaceae. **Reed canary grass.**

No. 213. *Muikoigo, Kikuyu.* Scott Agricultural Laboratory, Nairobi, Kenya Colony. A tall rough grass usually considered indigenous to the northern part of the Northern Hemisphere, but it is apparently native in marshy land in the Kenya highlands. The natives regard it as a good forage grass.

For previous introduction see No. 68146.

75350 to 75373. PHASEOLUS spp. Fabaceae.

75350. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 257. *Mpokya.* Government plantation, Serere, Eastern Province, Uganda.

75351 to 75353. PHASEOLUS LUNATUS L. **Lima bean.**

Locally grown varieties from the Upare Mountains, Moshi District, Tanganyika.

75351. No. 244. From Kinkwema (Kipare). Only the seeds of this plant are edible, the green parts being poisonous.

75352. No. 249. An unknown variety.

75353. No. 250. From Kinkwema (Kipare). Only the seeds of this plant are edible, the green parts being poisonous.

75354. PHASEOLUS MUNGO L. **Urd.**

No. 265. A locally grown variety from the Government plantation, Serere, Eastern Province, Uganda.

75355 to 75373. PHASEOLUS VULGARIS L. **Common bean.**

Nos. 75355 to 75361 are from Moshi District, Tanganyika Territory.

75355. No. 245.
75356. No. 246.
75357. No. 247.
75358. No. 248.
75359. No. 251.
75360. No. 252.
75361. No. 253.

Nos. 75362 to 75368 are from the Government plantation, Serere, Eastern Province, Uganda.

75362. No. 258.
75363. No. 259.
75364. No. 260.
75365. No. 261.
75366. No. 262.
75367. No. 263.
75368. No. 264.

Nos. 75369 to 75373 are from Southern Rhodesia.

75369. No. 267. *Mont sor.*
75370. No. 268. *Lyonnais.*
75371. No. 270. *Parisian.*
75372. No. 271. *Algerian white wax.*
75373. No. 272. *Natal sugar.*

75286 to 75403—Continued.

75374. SOLANUM sp. Solanaceae.

No. 43. *Mtongu.* Near Nairobi, Kenya Colony, July 2, 1927. A tropical shrub, thorny at the base, with thick pubescent, simple potato-like leaves, deep-purple flowers having yellow stamens, and pale-green fruits with dark-green markings near the calyx.

75375. WITHANIA SOMNIFERA Dunal. Solanaceae.

No. 99. From the region of Kabiti, near Nairobi, Kenya Colony, July 11, 1927. A tropical plant, about 2½ feet high, with small red fruits.

75376. SORGHUM TRICHOPUS Stapf. Poaceae. **Grass.**

No. 205. Scott Agricultural Laboratory, Nairobi, Kenya Colony. A stiff coarse grass, 5 feet high, found in bush land.

75377. SORGHUM sp. Poaceae. **Grass.**

No. 178. A common grass on the Kinangop Plains, between the Kinangop Forest Station and Nainasha, Kenya Colony. It is of very soft texture and is a promising grass for high altitudes.

75378. SPOROBOLUS sp. Poaceae. **Grass.**

No. 222. *Kikuyu, kigutu.* Scott Agricultural Laboratory, Nairobi, Kenya Colony. A tall grass used by the natives as fences or hedges for dividing their shambas (fields or farms). It is also used for thatching, but, so far as known, it is not grazed to any extent by cattle or game animals, though it is said to be relished by horses.

75379. SPOROBOLUS sp. Poaceae. **Grass.**

No. 223. Scott Agricultural Laboratory, Nairobi, and Athi Plains, Kenya Colony. A common grass in stream beds and low places on the plains at an altitude of 5,000 feet or less. It is not seen in the highlands and is probably not an important element in grazing.

75380 to 75382. STIZOLOBIUM spp. Fabaceae.

From Southern Rhodesia.

75380. STIZOLOBIUM ATERRIMUM Piper and Tracy. **Mauritius bean.**

No. 269. *Tracy's early black.*

75381. STIZOLOBIUM NIVEUM (Roxb.) Kuntze. **Chinese velvetbean.**

No. 273. *White stringless.*

75382. STIZOLOBIUM VELUTINUM Piper and Tracy. **Velvetbean.**

No. 287.

75383. STREBLOCHAETA sp. Poaceae. **Grass.**

No. 169. A local grass found above the bamboo forest, between Camp Gustiru and the Kinangop Forest Station, Kenya Colony, July 30, 1927.

75384. THEMEDA TRIANDRA Forsk. Poaceae. **Rooi grass.**

No. 204. *Nirigeta, kikuyu.* Scott Agricultural Laboratory, Nairobi, Kenya Colony. This is the predominant, most conspicuous, and most valuable grass on the Kapiti and Athi Plains, and is common up to an altitude of 8,000 feet or more. It is regarded as a fine feeding grass even when dry, and comes back quickly after burning. The seeds dry as soon as ripe and quickly penetrate the ground because of their horny points. The seeds are difficult to germinate artificially, and are probably difficult to harvest.

For previous introduction see No. 54044.

75286 to 75403—Continued.

75385. TRIFOLIUM JOHNSTONI Oliver. Fabaceae. **Kenya clover.**

No. 227. A creeping white clover almost indistinguishable from *T. repens*. It is widely distributed in the Kenya highlands but rarely occurs in pure stands. Although acknowledged to be highly palatable and nutritious, it was not found in cultivation. It withstands some frost, but not freezing.

75386. TRIFOLIUM sp. Fabaceae. **Clover.**

No. 228. Uplands creeping red clover. Uplands, Kenya Colony. A clover which is fairly common in the Kenya highlands between 7,000 and 9,600 feet altitude. It occurs higher than *T. johnstoni*, but is not so abundant. The foliage is rather stiff, and is claimed by some to be neither palatable nor nutritious. Several forms and colors of blossoms were met with, but are believed to be variations of the same species. The flowers are wine colored or lighter, turning blue when ripe; not a profuse bloomer and usually a shy seeder.

75387. VERNONIA sp. Asteraceae.

No. 11. Near Nairobi, Kenya Colony, June 28, 1927. A composite with tubular purple flowers and swollen stalks, found in a clearing with oatgrass.

75388. VERNONIA sp. Asteraceae.

No. 20. Near Nairobi, Kenya Colony, June 29, 1927. A semiclimbing herbaceous plant with purple flowers, often seen on the edge of the woods along the side of the road, where it covers the low trees and bushes.

75389 to 75395. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

Collected in Tanganyika Territory.

75389. No. 236. From Moshi District.

75390. No. 238. From Tanga District.

75391. No. 239. From Tanga District.

75392. No. 240. From Moshi District.

75393. No. 241. From Moshi District.

75394. No. 242. From Moshi District.

75395. No. 243. From Newanza District.

75396 to 75402. Collected in Kenya Colony.

75396. (Undetermined.)

No. 22. Near Nairobi, June 29, 1927. A vine resembling Parthenocissus in habit, with thick brittle leaves.

75397. (Undetermined.)

No. 58. Near Nairobi, July 4, 1927. A legume with leaflets 2 to 3 inches across and a large underground root which the natives boil and use as a remedy for fever.

75398. (Undetermined.)

No. 83. July 8, 1927. Bulbs collected at Kabiti, near Nairobi.

For previous introduction of seeds and description see No. 75221.

75399. (Undetermined.)

No. 100. From the region of Kabiti, near Nairobi, July 11, 1927. A shrub, about 6 feet high, with rhamnuslike leaves and fruits four in a cluster, loosely attached at the base, which become red.

75400. (Undetermined.)

No. 147. A small tree found at the edge of the forest near Uplands, July 26, 1927.

75286 to 75403—Continued.

75401. (Undetermined.)

No. 149. A shrub or small tree found on the upper slopes of the Rift Valley, July 27, 1927.

75402. (Undetermined.)

No. 226. A small leguminous plant found in the region of Kikuyu, near Nairobi, July 12, 1927.

75403. CYRTANTHUS SANGUINEUS (Lindl.) Hook. f. Amaryllidaceae.

No. 232. Athi Plains. A handsome amaryllidaceous plant, native to Kaffraria, South Africa. The narrow, dark-green leaves taper into a rounded petiole, and the flower, yellowish on the outside and bright orange-red within, is borne on a scape 3 or 4 inches high.

75404. CITRUS NOBILIS UNSHIU Swingle. Rutaceae. Satsuma orange.

From Silverhill, Ala. Bud wood presented by F. Mays, through W. T. Swingle, Bureau of Plant Industry. Received October 29, 1927.

A hybrid Satsuma orange.

75405. PICEA GLEHNI (Schmidt) Masters. Pinaceae. Spruce.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received November 12, 1927.

Nos. 25 and 26. Collected in the mountains near Jozankei, south of Sapporo, October 17, 1927. A large tree up to 150 feet in height, native to northern Japan. The seeds are said to retain their vitality for seven years.

75406. CARYA TONKINENSIS Lecomte. Juglandaceae.

From Kangpoki, Assam, India. Seeds presented by G. C. Crozier, of the American Baptist Foreign Missionary Society. Received November 16, 1927.

A hickory tree native to Assam, India. The leaves are made up of five to seven ovate-lanceolate leaflets, and the depressed globose nuts are about 1½ inches in diameter, with a thick shell.

75407. DIOSCOREA sp. Dioscoreaceae. Yam.

From the Fiji Islands. Tubers presented by Gerrit P. Wilder, Honolulu, Hawaii. Received January 29, 1926. Numbered December, 1927.

Fijian pearl yam. This variety is known in the Fiji Islands as Kawhai. According to Mr. Wilder, the tubers are smaller than those of the coarser varieties. He also considers this variety of better quality than a sweetpotato.

75408 to 75438.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received in November, 1927.

75408 to 75414. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

75408. No. 28. A wild form found near Nabaribetsu Station, Hokkaido, October 17, 1927.

75409. No. 29. *Shiba-guri*. A wild variety from the botanic garden, Hokkaido Imperial University, Sapporo, Hokkaido, September 20, 1927.

75410. No. 30. A cultivated variety originally from Shinshu, Nagano Ken, growing in the botanic garden, Hokkaido Imperial University, Sapporo, Hokkaido, October 13, 1927.

75408 to 75438—Continued.

75411. No. 31. A cultivated variety, originally from Shinshu, Nagano Ken, growing in the botanic garden, Hokkaido Imperial University, Sapporo, Hokkaido, September 20, 1927.

75412. No. 32. *Sho-gwatsu.* A late, cultivated variety from Fukuchi farm, Mamada Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75413. No. 33. October 21, 1927. Seeds from the same tree as No. 32 [No. 75412].

75414. No. 34. *Cho-bei.* A cultivated variety from Fukuchi farm, Mamado Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75415. BETULA JAPONICA Siebold. Betulaceae. **Japanese white birch.**

No. 35. *Shira kamba.* Near Sapporo, October 17, 1927. A Japanese tree about 60 feet high.

75416 to 75438. CASTANEA CRENATA Sieb. and Zucc. Fagaceae.

75416. No. 36. *Shimo-kaiangi.* A cultivated variety from Fukuchi farm, Mamada Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75417. No. 37. Seeds from the same tree as No. 36 [No. 75416].

75418. No. 38. *Otamba.* A cultivated variety from Fukuchi farm, Mamada Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75419. No. 39. *Yoro.* A cultivated variety, originally from Angyo, growing at the Fukuchi farm, Mamada Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75420. No. 40. *Kamasu-guri.* A cultivated variety from Fukuchi farm, Mamada Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75421. No. 41. *Yoro.* A late cultivated variety from Fukuchi farm, Mamada Cho, Nishikuroda, Tochigi Ken, October 21, 1927.

75422. No. 42. *Okutamba.* A cultivated variety from Sunaga farm, Oyama Cho, Tochigi Ken, October 20, 1927. This tree was a seedling and was not grafted. A seedling is much older before it bears than a grafted tree.

75423. No. 43. *Chusei tamba.* A very prolific, cultivated variety from Sunaga farm, Oyama Cho, Tochigi Ken, October 20, 1927.

75424. No. 44. *Yamaguchi-ganne.* A very late, cultivated variety from Sunaga farm, Oyama Cho, Tochigi Ken, October 20, 1927. A grafted tree.

75425. No. 45. *Togenashi-guri.* A cultivated variety from Sunaga farm, Oyama Cho, Tochigi Ken, October 20, 1927. A rare variety and not of much commercial value. It bears fewer fruits than other kinds, and these are attacked by worms.

75426. No. 46. *Okutamba.* A cultivated variety from Sunaga farm, Oyama Cho, Tochigi Ken, October 20, 1927. A grafted tree whose fruit is not good for storing because it is attacked by the fruit worms.

75427. No. 47. A cultivated variety, originally from Angyo, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927. The tree grows well, but does not have many fruits. The varietal name is unknown.

75408 to 75438—Continued.

75428. No. 48. *Shimo-katsugi.* A cultivated variety, originally from Ayabe, Kyoto, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927.

75429. No. 49. *Wazo.* A cultivated variety from Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927.

75430. No. 50. *Ganne.* A cultivated variety from Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927.

75431. No. 51. *Chobei.* A cultivated variety from Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927. The main stem is infected with chestnut blight, and the owner said that the tree would die in three or four years.

75432. No. 52. *Kinyoshi.* A cultivated variety, originally from Okitsu, Schizuaka Ken, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927.

75433. No. 53. *Tamba-guri.* A late cultivated variety from Sunaga farm, Oyama Cho, Tochigi Ken, October 20, 1927.

75434. No. 54. *Banseki.* A cultivated variety, originally from Angyo, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927. The trunk is infected with blight. The fruit ripens the last part of October and the first part of November.

75435. No. 55. *Otamba, chokoji.* A cultivated variety originally from Angyo, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927.

75436. No. 56. *Kenaga.* A cultivated variety from Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927.

75437. No. 57. *Kin-seki* (golden red). A cultivated variety originally from Angyo, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927. The varietal name was given by the owner of this tree and is not a recognized variety.

75438. No. 58. *Sho-gwatsu.* A cultivated variety, growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken, October 21, 1927. The original scions of this tree came from Ayabe, Kyoto, and were grafted on wild stock of Shiba-guri.

75439. IRIS sp. Iridaceae.

From Spain. Bulbs collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 21, 1927. Numbered in December, 1927.

No. 1297. March 31, 1927. A dwarf blue-flowered iris, not over 6 or 8 inches tall, covering patches of hundreds of square yards of dry sandy soil near the sea along the southern coast of Spain between Malaga and Gibraltar.

75440 to 75525.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received in November, 1927.

Nos. 75440 to 75455 were collected near Sapporo, Hokkaido, Japan, in October, 1927.

75440. PICEA JEZOENSIS (Sieb. and Zucc.) Carr. Pinaceae. **Yeddo spruce.**

No. 60. *Kuro-ezo.* October 17, 1927. A Japanese tree, up to 150 feet in height, with dark-gray bark and slender horizontally spreading branches. The leaves are silvery white above and dark green beneath, and the staminate flowers are orange-crimson.

For previous introduction see No. 65942.

75440 to 75525—Continued.

75441. ACTINIDIA ARGUTA (Sieb. and Zucc.) Planch. Dilleniaceae. **Bower actinidia.**

No. 61. *Kokuwa.* October 17, 1927. A white-flowered shrubby Japanese vine with broadly oval leaves and greenish yellow fruits having a sweet flavor.

For previous introduction see No. 69359.

75442. CORNUS CONTROVERSA Hemsl. Cornaceae. **Giant dogwood.**

No. 62. *Midzuki.* October 17, 1927. A Japanese tree up to 60 feet high, with a trunk 7 feet in girth. The numerous, long branches extend at right angles to the trunk, with the lowest branches sometimes touching the ground. The white or slightly yellowish flowers are in flat clusters 6 or 7 inches in diameter, appearing from late May to early June.

For previous introduction see No. 61775.

75443. ABIES SACHALINENSIS (Schmidt.) Masters. Pinaceae. **Sakhalin fir.**

No. 63. *Todomatsu.* October 17, 1927. A tree 150 feet high, native to northern Japan. It has the *nordmanniana* arrangement of leaf, but in the forward-pointing leaves, which are three-fourths of an inch to 1½ inches long and very white beneath; it resembles *Abies veitchii.* The buds are white and resinous, and the cones are 2½ to 3¼ inches long. This tree is liable to injury by late frost in the United States.

75444. FRAXINUS LONGICUSPIS Sieb. and Zucc. Oleaceae. **Ash.**

No. 64. *Aodamo.* October, 1927. A graceful Japanese tree up to 45 feet high, with compound leaves of five to seven lanceolate long-pointed leaflets. The white flowers appear in June, and the foliage turns purple in autumn.

75445. JUGLANS SIEBOLDIANA Maxim. Juglandaceae. **Japanese walnut.**

No. 65. *Omigurumi.* October 17, 1927. A round-headed Japanese tree up to 60 feet high, with 9 to 17 ovate-serrulate leaflets and ovoid, thick-shelled nuts.

75446 to 75525. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

These varieties were obtained in October, 1927.

Nos. 75446 to 75468 are cultivated trees growing at the Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken.

75446. No. 66. Seeds from the same tree as No. 47 [No. 75427].

75447 and 75448. Seeds from the same tree as No. 48 [No. 75428].

75447. No. 67. **75448.** No. 68.

75449 to 75451. Seeds from the same tree as No. 51 [No. 75431].

75449. No. 69. **75451.** No. 71.

75450. No. 70.

Nos. 75452 to 75455 are from cultivated trees growing at the Sunaga farm, Oyama Cho, Tochigi Ken.

75452. No. 72. An unknown variety.

75453. No. 73. Seeds from the same tree as No. 53 [No. 75433].

75454 and 75455. Seeds from the same tree as No. 72 [No. 75452].

75454. No. 74. **75455.** No. 75.

75456 to 75480. Seeds from the same tree as No. 54 [No. 75434].

75456. No. 76. **75459.** No. 79.

75457. No. 77. **77460.** No. 80.

75458. No. 78.

75440 to 75525—Continued.

75461. No. 81. Seeds from the same tree as No. 51 [No. 75431].

75462. No. 82. Seeds from the same tree as No. 54 [No. 75434].

75463 to 75465. Seeds from the same tree as No. 58 [No. 75438].

75463. No. 83. **75465.** No. 85.

75464. No. 84.

75466. No. 86. Seeds from the same tree as No. 55 [No. 75435].

75467 and 75468. Seeds from the same tree as No. 57 [No. 75437].

75467. No. 87. **75468.** No. 88.

Nos. 75469 to 75475, *Shiba-guri* or *yama-guri,* are wild trees growing at Chojagahara, Karasawa Valley, Kitakano Mura, Tagata Gun, Shizuoka Ken. The field where these trees are growing is burned over every three or four years.

75469. No. 89. **75473.** No. 93.

75470. No. 90. **75474.** No. 94.

75471. No. 91. **75475.** No. 95.

75472. No. 92.

75476. No. 96. *Shiba-guri* or *yama-guri.* Wild trees growing in a mixed forest at Tagata Gun, Shizuoka Ken.

75477 to 75481. *Shiba-guri* or *yama-guri.* Wild trees growing at Chojagahara, Karasawa Valley, Kitakano Mura, Tagata Gun, Shizuoka Ken. The field where these trees are growing is burned over every three or four years.

75477. No. 97. **75480.** No. 100.

75478. No. 98. **75481.** No. 101.

75479. No. 99.

75482 to 75484. From wild trees growing in a forest at Dodoko.

75482. No. 102. **75484.** No. 104.

75483. No. 103.

75485. No. 105. *Shiba-guri.* Wild trees growing in the forest at Sekido, Tamagawa Mura, Tokyo-fuka.

75486 to 75490. *Tamba-guri.* Cultivated trees growing at Kobara, Kitakami Mura, Tagata Gun, Shizuoka Ken.

75486. No. 106. **75489.** No. 109.

75487. No. 107. **75490.** No. 110.

75488. No. 108.

75491 to 75493. *Shiba-guri.* Wild trees growing at Ohna, Kitakano Mura, Tagata Gun, Shizuoka Ken.

75491. No. 111. **75493.** No. 113.

75492. No. 112.

75494 and 75495. Obtained at Tokyo and said to have come originally from Chosen.

75494. No. 114. **75495.** No. 115.

75496 and 75497. Wild trees growing at Susono, Fukara Mura, Sunto Gun, Shizuoka Ken.

75496. No. 116. **75497.** No. 117.

75498 and 75499. *Shiba-guri.* Wild trees growing at Subashiri-yama, on the east side and at the foot of Mount Fuji, Sunto Gun, Shizuoka Ken.

75498. No. 118. **75499.** No. 119.

75500. No. 120. Wild trees growing at Tsukuhara, Nishikida Mura, Tagata Gun, Shizuoka Ken. Seeds obtained at Mishima Machi.

75440 to 75525—Continued.

75501. No. 121. A cultivated tree growing at Noboribetsu, Hokkaido.

75502 and 75503. Wild trees growing on the east side of Mount Fuji, Omikami-yama, Subashiri Mura, Sunto Gun, Shizuoka Ken.

75502. No. 122. 75503. No. 123.

75504 to 75508. *Shiba-guri.* Wild trees growing at Subashiri-yama, on the east side of Mount Fuji, Subashiri Mura, Sunto Gun, Shizuoka Ken.

75504. No. 124. 75507. No. 127.

75505. No. 125. 75508. No. 128.

75506. No. 126.

75509. No. 129. Wild trees growing at Subashiri-yama, Subashiri Mura, Sunto Gun, Shizuoka Ken.

75510 and 75511. Wild trees growing in the forest on the north side of Subashiri-yama, Subashiri Mura, Sunto Gun, Shizuoka Ken.

75510. No. 130. 75511. No. 131.

75512 to 75516. Wild trees growing in the forest at Omikami-yama, Subashiri Mura, Sunto Gun, Shizuoka Ken.

75512. No. 132. 75515. No. 135.

75513. No. 133. 75516. No. 136.

75514. No. 134.

75517 and 75518. *Shiba-guri, yama-guri.* Wild trees growing at Yata, Nishikida Mura, Tagata Gun, Shizuoka Ken.

75517. No. 137. 75518. No. 138.

75519 to 75525. Wild trees growing at the foot of Mount Fuji in the forest at Omikami-yama, Subashiri Mura, Sunto Gun, Shizuoka Ken.

75519. No. 139. 75523. No. 143.

75520. No. 140. 75524. No. 144.

75521. No. 141. 75525. No. 145.

75522. No. 142.

75526. ERIOSEMA CAJANOIDES (Guill. and Perr.) Hook. f. Fabaceae.

From Luchenza, Nyasaland Protectorate, Africa. Seeds presented by L. S. Norman. Received January 22, 1927. Numbered in December, 1927.

No. 5. An erect branching tropical African shrub 4 to 5 feet high, with three oblanceolate leaflets 2 to 3 inches long, coated beneath with fine gray pubescence. The yellow flowers are in moderately close racemes 2 to 4 inches long, and the short broad pods are thinly covered with long grayish silky hairs.

75527 and 75528. BROMUS COLORATUS Steud. Poaceae. Bromegrass.

From Castro, Chiloe Island, Chile. Seeds presented by Raymond and Elnora Shannon, through Paul Russell, Bureau of Plant Industry. Received March 23, 1927. Numbered in November, 1927.

A grass 1 to 2 feet high, with linear leaves and long slender panicles. Native to southern South America.

75527. No. 1. 75528. No. 2.

75529 and 75530.

From Brignoles, France. Seeds presented by R. Salgues, Director of the Brignoles Botanic Station. Received November 9, 1927.

75529 and 75530—Continued.

75529. BRACHYPODIUM PHOENICOIDES (L.) Roem. and Schult. Poaceae. Grass.

A perennial grass 1 to 2 feet high, native to the Mediterranean region, with very narrow leaves tufted at the base, and long spikelets of 16 to 20 florets resembling wheatgrass.

75530. TRIFOLIUM STELLATUM L. Fabaceae. Clover.

An annual upright clover about a foot high, native to the Mediterranean region, possibly of value as a forage crop.

For previous introduction see No. 69863.

75531. EPHEDRA SINICA Stapf. Gnetaceae.

From Peking, China. Seeds presented by B. E. Read, through W. T. Swingle, Bureau of Plant Industry. Received November 1, 1927.

A low branching shrub about a foot high, native to northern China. The leaves are minute and scalelike, This shrub is considered valuable as a source of ephedrin.

75532. PRUNUS sp. Amygdalaceae.

From Otaru, Japan. Seeds presented by C. H. McCrory, of the Rose Kindergarten. Received November 8, 1927.

These seeds, which were received without any information, are apparently a form of Japanese flowering cherry.

75533. DELPHINIUM GRANDIFLORUM L. Ranunculaceae. Siberian larkspur.

From Japan. Seed collected by R. K. Beattie, Bureau of Plant Industry. Received in November, 1927.

No. 18. A variety, originally from Russia, growing in the botanic garden, Hokkaido Imperial University, Sapporo, Hokkaido, October 10, 1927.

75534 to 75574.

From Melbourne, Victoria, Australia. Seeds obtained from the Melbourne Botanic Gardens, through Miss Anne MacIlvaine, Trenton, N. J. Received November 3, 1927.

75534 to 75541. ACACIA spp. Mimosaceae.

75534. ACACIA ACCOLA Maiden and Betche.

An erect bushy shrub 6 to 8 feet high, native to New South Wales, Australia. The linear, slightly curved phyllodes are 3 to 5 inches long and one-twelfth of an inch wide. The flowers are borne in racemes about 2 inches long and are arranged in heads of 10 to 20 flowers each. The linear waxy pods are flat and about 4 inches long.

75535. ACACIA ACINACEA Lindl.

A much-branched shrub with oblique phyllodes less than an inch long and globular heads of small flowers. Native to Australia.

75536. ACACIA DECURRENS Willd. Green wattle.

Variety *normalis.* A variety of the green wattle with sepals as long as the petals, which is cultivated in California. The typical form is a handsome tree with light-green feathery foliage and bright-yellow flowers.

For previous introduction see No. 67946.

75537. ACACIA DISCOLOR Willd.

An unarmed shrub or small tree native to southeastern Australia and Tasmania. The terminal axillary clusters of yellow flowers are produced during the autumn.

For previous introduction see No. 74423.

75534 to 75574—Continued.

75538. ACACIA TERMINALIS (Salisb.) Macbride (*A. elata* A. Cunn.).

A handsome unarmed tree 60 feet or more in height, native to New South Wales. The young shoots are often tinged with a golden-yellow pubescence, and the globular, yellow flower heads are in clusters often 6 inches long.

For previous introduction see No. 56559.

75539. ACACIA HOWITTI F. Muell.

A shrub often 15 feet high, native to Australia. The branchlets are slender and flexible, bearing curved lanceolate dark-green phyllodes and axillary clusters of small flower heads.

75540. ACACIA LINIFOLIA PROMINENS (A. Cunn.) Moore.

An unarmed shrub, 12 to 18 feet high, native to New South Wales. It has angular branchlets and very narrow phyllodes. The small, globular, yellow flower heads are borne in racemes about as long as the phyllodes.

For previous introduction see No. 56560.

75541. ACACIA NERIIFOLIA A. Cunn. Bald acacia.

A handsome tree, native to eastern Australia, 40 to 50 feet high, with slender branchlets, mealy-tomentose when young, but soon glabrous. The small globular flower heads are in simple slender racemes, shorter than the linear phyllodes. The straight, flat pods are several inches long. The heartwood is light yellow, and the rest of is a darker color. It is close grained and tough and has attractive markings.

For previous introduction see No. 48056.

75542. AGONIS FLEXUOSA (Willd.) DC. Myrtaceae.

A tall shrub or tree up to 40 feet high, native to Western Australia. The young shoots are silky, and the linear-lanceolate leaves, 2 to 6 inches long, have in their axils small heads of flowers with persistent white petals.

75543. ALECTRYON SUBCINEREUM (A. Gray) Radlk. (*Nephelium leiocarpum* F. Muell.) Sapindaceae.

A small evergreen Australian tree.

For previous introduction see No. 51000.

75544. BAECKEA VIRGATA Andrews. Myrtaceae.

An erect, loosely branched shrub, up to 12 feet high, native to Australia. The narrowly oblong leaves, less than an inch in length, are opposite, and the small, white flowers are in clusters of two or three in the axils of the upper leaves.

75545. BANKSIA INTEGRIFOLIA L. f. Proteaceae.

A small tree with the young shoots covered with rich brown woolly hairs. The scattered, lanceolate leaves, up to 6 inches long, are silvery white beneath, and the large, greenish yellow flowers are in oblong spikes 6 inches long. Native to Australia.

75546. BANKSIA SPINULOSA J. E. Smith. Proteaceae.

A tall evergreen shrub native to Australia. The narrowly linear leaves, 3 inches long, are notched at the end with a prominent point in the notch and have revolute margins. The large yellow flowers are borne in ovoid spikes 2 to 3 inches long.

75534 to 75574—Continued.

75547. BRACHYCHITON ACERIFOLIUM F. Muell. (*Sterculia acerifolia* Cunn.). Sterculiaceae.

An Australian tree, up to 35 feet high, with dark-green shining, maplelike leaves 6 to 10 inches wide, and scarlet, bell-shaped flowers which hang from the tree in large clusters.

For previous introduction see No. 44958.

75548. CALLISTEMON ACUMINATUS Cheel. Myrtaceae.

An Australian shrub with lanceolate sharp-pointed leaves and spikes of ornamental flowers.

75549. CALLISTEMON RIGIDUS R. Br. Myrtaceae.

A tall shrub, sometimes 30 feet high, native to New South Wales. The leaves, 2 to 5 inches long, are narrowly linear, and the red flowers, with dark-red stamens an inch long, are borne in large dense spikes.

For previous introduction see No. 47549.

75550. CASSIA ARTEMISIOIDES Gaud. Caesalpiniaceae.

An erect bushy shrub covered with silky white tomentum. The leaves are made up of three to six pairs of linear-terete leaflets an inch long, and the yellow flowers are in short dense racemes. Native to Australia.

75551. CASUARINA GLAUCA Sieber. Casuarinaceae. Beefwood.

An Australian tree, 60 to 70 feet high, usually straight and of rapid growth. The timber is red, beautifully marked, hard and tough, and is used for cabinetwork, staves, and fuel. In periods of drought the foliage is used for feeding stock. When the trees are cut down, the young growth shoots up quickly from the stump. This variety grows in the coastal districts, marshy country, and frequently in land submerged with tidal water. It makes a handsome shade tree.

For previous introduction see No. 42286.

75552. CHORIZEMA CORDATUM Lindl. Fabaceae.

A tall slender glabrous evergreen shrub, 7 to 10 feet high, with weak branches, more or less prickly leaves about 2 inches long, and numerous red flowers. It is propagated from cuttings and may be grown in the open in southern California and southern Florida, being excellent for training on pillars and trellises. In colder regions it is an attractive plant for the cool greenhouse.

For previous introduction see No. 44831.

75553. CORREA BAUERLENII F. Muell. Rutaceae.

An Australian shrub which has branchlets covered with dark-brown hairs, opposite lanceolate thin leaves pale beneath, and yellowish green tubular flowers in the axils.

75554. DORYANTHES LARKINI C. Moore. Amaryllidaceae. Spearlily.

A perennial herb, with sword-shaped leaves 6 feet long, native to Australia. The flower stem is 8 feet high, the upper 3 feet being a compact panicle of flowers which are 2 inches long, red outside and white inside.

75555 to 75562. EUCALYPTUS spp. Myrtaceae.

75555 to 75557. EUCALYPTUS CALOPHYLLA Lindl. Port Gregory gum.

Varieties developed in Australia.

For previous introduction see No. 44959.

75555. A variety with salmon-colored flowers.

75534 to 75574—Continued.

75556. A white-flowered variety.

75557. A rose-flowered variety.

75558. EUCALYPTUS CANALICULATA Maiden. Tall gray gum.

An Australian tree which reaches a height of 120 feet and a diameter of 4 feet. The leaves are narrowly lanceolate, the fruits are hemispheric with two ridges around the outside, forming a canal, and the snuff-brown wood is coarse and tough.

75559 to 75561. EUCALYPTUS FICIFOLIA F. Muell. Scarlet gum.

Brilliant-flowered Australian trees.

For previous introduction see No. 49842.

75559. A crimson-flowered variety.

75560. A variety with orange-red flowers.

75561. A white-flowered variety.

75562. EUCALYPTUS INCRASSATA DUMOSA Maiden.

A shrub or small tree, native to Australia, with smooth white bark. The thick smooth leaves are lanceolate to ovate-falcate, and 3 to 4 inches long, flowers in clusters of four to eight on axillary peduncles, and oblong fruits about 1 inch in length.

75563. GREVILLEA BANKSII R. Br. Proteaceae.

Variety *Forsteri*. An evergreen shrub, 6 to 8 feet high, with red flowers.

For previous introduction see No. 40042.

75564. KENNEDIA COCCINEA Vent. Fabaceae.

A handsome trailing or twining woody vine native to Australia. It has three or five ovate leaflets, and the scarlet flowers are in long-stemmed clusters of 15 to 20.

75565 to 75567. MELALEUCA spp. Myrtaceae.

75565. MELALEUCA NODOSA J. E. Smith.

A tall smooth shrub, native to Australia, with rigid awl-shaped leaves and small heads, half an inch in diameter, of pale-yellow flowers.

75566. MELALEUCA PUBESCENS Schauer.

A tall shrub or small tree native to Australia. The small linear leaves, half an inch long, are crowded on the pubescent branches, and the small white flowers are borne in loose cylindrical spikes.

75567. MELALEUCA STYPHELIOIDES J. E. Smith.

A tall Australian tree, sometimes 80 feet high, with thick spongy bark. The leaves are very small, and the small creamy white flowers are in dense spikes about 2 inches long.

75568. METROSIDEROS TOMENTOSA A. Rich. Myrtaceae. Irontree.

A handsome tree, about 40 feet high, growing chiefly near the sea. It has spreading branches, and brilliant scarlet flowers in large terminal cymes. The wood is hard and durable, and is especially useful for boat building.

For previous introduction see No. 51048.

75569. OXYLOBIUM LANCEOLATUM Druce. Fabaceae.

A tall Australian shrub with whorls of lanceolate leaves 3 to 5 inches long and yellow flowers in dense terminal racemes 6 inches long.

75570. PITTOSPORUM PHILLYRAEOIDES DC. Pittosporaceae. Willow pittosporum.

An Australian desert tree, up to 20 feet high, with evergreen willowlike leaves and gracefully weeping branches. The small yellow flowers are followed by yellow fruits half an inch long, which are quite ornamental.

75534 to 75574—Continued.

75571. SOPHORA TETRAPTERA J. Miller. Fabaceae. Fourwing sophora.

A handsome large shrub or small tree, native to New Zealand, with green pinnate leaves and large clusters of yellow flowers. The wood is hard and durable.

For previous introduction see No. 49029.

75572. SYNCARPIA GLOMULIFERA (J. E. Smith) Niedenzu. Myrtaceae.

A tree growing to a height of 200 feet, native to Australia. The wood is very durable and is resistant to dampness.

For previous introduction see No. 38731.

75573. TRISTANIA CONFERTA R. Br. Myrtaceae. Brisbane-box.

A tall tree, native to Australia, with smooth brown deciduous bark and dense foliage. The alternate leaves are 3 to 6 inches long, and the cymes contain from three to seven large flowers. The timber is very strong and is used in shipbuilding and for making wharves and bridges. The bark is used occasionally for tanning.

For previous introduction see No. 73867.

75574. TRISTANIA LAURINA R. Br. Myrtaceae.

A tall tree found in moist locations along streams in Australia. The young shoots and the under side of the alternate lanceolate leaves are silky pubescent. The small yellow flowers are in short clusters in the axils of the leaves.

75575. IRIS sp. Iridaceae.

From Spain. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 21, 1927. Numbered in December, 1927.

For description see No. 75439.

75576 to 75655.

From New South Wales, Australia. Seeds presented by Dr. G. P. Darnell-Smith, Director of the Botanic Garden at Sydney. Received November 2, 1927.

75576 to 75612. ACACIA spp. Mimosaceae.

75576. ACACIA ACCOLA Maiden and Betche.

For previous introduction and description see No. 75534.

75577. ACACIA BANCROFTI Maiden.

An Australian shrub about 6 feet high, forming stools several feet in diameter. The obovate phyllodes are 5 to 7 inches long, and the bright-yellow flowers are borne in racemes.

75578. ACACIA BETCHEI Hort.

75579. ACACIA BRACHYBOTRYA Benth.

A handsome shrub, several feet in height, which is silvery white with a close silky pubescence. It bears a small number of axillary racemes of tomentose, many-flowered heads, and has very short leaves. Native to southeastern Australia.

For previous introduction see No. 48037.

75580. ACACIA BRACHYSTACHYA Benth.

A hoary, shrubby acacia, native to New South Wales, Australia. The phyllodes are linear and awl-shaped, while the flowers are borne in very short spikes.

75581. ACACIA BUXIFOLIA A. Cunn.

An Australian shrub 4 feet high, with angular branchlets and small, rather thick phyllodia. The short racemes, scarcely longer than the phyllodia, bear globular heads of flowers.

For previous introduction see No. 49890.

75576 to 75655—Continued.

75592. ACACIA DECORA Reichenb.

A shrub with spatulate phyllodes 2 inches long and numerous racemes made up of globular heads of small flowers. Native to Queensland, Australia.

75593. ACACIA DECURRENS Willd.
Green wattle.

A handsome Australian tree with light-green foliage and axillary racemes of bright-yellow flowers.

For previous introduction see No. 74422.

75594. ACACIA DECURRENS LEICHHARDTII Benth.

This form of the green wattle differs from the common one in having smaller and narrower leaflets and spreading hairs. Native to Australia.

75585. ACACIA DECURRENS PAUCIGLANDULOSA F. Muell.

A form of the green wattle with fewer glands on the petioles and with softer pubescence than the usual form.

75586. ACACIA DIFFORMIS R. T. Baker.

A glabrous tree up to 30 feet high, native to New South Wales, Australia. The phyllodes are oblanceolate, coriaceous, and 3 to 8 inches long, and the small globular heads of flowers are in racemes.

75587. ACACIA DISCOLOR Willd.

For previous introduction and description see No. 75537.

75588. ACACIA DORATOXYLON A. Cunn.

A tree up to 20 feet high, native to New South Wales, Australia. The phyllodes are linear-lanceolate and falcate, and the flowers are in axillary cylindrical spikes.

75589. ACACIA FALCATA Willd.

A tree, 20 to 30 feet high, with few slender branches and small, yellow flowers in dainty spherical clusters on racemes borne in the axils of dark glossy green falcate leaves. The timber is hard, heavy, and tough.

For previous introduction see No. 48044.

75590. ACACIA FLEXIFOLIA A. Cunn.

A shrubby acacia, native to New South Wales, Australia, with terete branches, numerous linear phyllodes slightly bent near the base, and small globular heads of flowers on short stems.

75591. ACACIA GLAUCESCENS Willd.

An Australian tree up to 50 feet high, with flowers in axillary spikes 1 to 2 inches long. The branchlets and phyllodes are covered with a gray pubescence, giving an ashy hue.

75592. ACACIA HAKEOIDES A. Cunn.

A tall glabrous shrub, native to New South Wales, Australia, with narrow oblong phyllodes 5 inches long and short racemes of globular flower heads.

75593. ACACIA HOMALOPHYLLA A. Cunn.

A small Australian tree which grows on the saltbush flats and in the bleakest and most arid localities wherever frost is not severe. The hard heavy wood is used in the manufacture of tobacco pipes, in cabinet-making, and for many other articles.

For previous introduction see No. 48045.

75576 to 75655—Continued.

75594. ACACIA JUNIPERINA Willd.
Prickly wattle.

An Australian shrub, 8 to 12 feet high, with numerous gracefully drooping branches covered with short hairs, and beautiful clusters of flowers. The wood is white and tough.

For previous introduction see No. 48047.

75595. ACACIA KOA HAWAIIENSIS Rock.

A valuable timber tree up to 60 feet high, native to the Hawaiian Islands. The falcate phyllodes are 5 inches long, and the flowers are borne in short racemes. The wood takes a high polish.

75596. ACACIA LEPTOCLADA A. Cunn.

A glabrous shrub with compound leaves made up of oblong coriaceous leaflets one-twelfth of an inch long and small flower heads in racemes longer than the leaves. Native to New South Wales, Australia.

75597. ACACIA LINEARIS Sims.

A straggly Australian shrub, sometimes 20 feet high, with phyllodes, slender as pine needles, 4 to 8 inches long, and loose interrupted spikes of flowers. The wood is used for furniture.

75598. ACACIA LINEATA A. Cunn.

A bushy shrub with pubescent terete branches, native to Australia. The linear phyllodes are less than an inch long, and the flowers are solitary.

75599. ACACIA MCNUTTIANA Hort.

75600. ACACIA MICROCARPA F. Muell.

A low Australian shrub, 2 to 5 feet high, the young shoots of which are covered with a golden pubescence. The linear-lanceolate, coriaceous phyllodes are falcate and less than 2 inches long. The flowers are borne in small heads in pairs on short stems.

75601. ACACIA OBTUSATA Sieb.

A tall glabrous shrub native to New South Wales. The oblong-linear phyllodes are 2 to 3 inches long, and the small flower heads are borne in dense racemes.

75602. ACACIA PENNINERVIS Sieb.

A tall Australian shrub or small tree which endures comparatively low temperatures. The phyllodes are narrow and sickle shaped, and the pale-yellow flowers are in short racemes. The bark is said to contain 18 per cent of tannic acid.

For previous introduction see No. 65718.

75603. ACACIA POLYBOTRYA FOLIOLOSA Benth.

A tall shrub, native to New South Wales, which has softly pubescent compound leaves and numerous small flower heads in racemes longer than the leaves, the terminal ones forming a panicle.

75604. ACACIA PULCHELLA R. Br.

A handsome shrub with slender branches armed with spines and feathery compound leaves. The flowers are in small heads on axillary peduncles. Native to Western Australia.

75605. ACACIA RUBIDA A. Cunn.

A tall glabrous shrub with angular branchlets, native to New South Wales. The falcate-lanceolate phyllodes are 3 inches long, and the small heads of flowers are in racemes shorter than the phyllodes.

75576 to 75655—Continued.

75606. ACACIA SALICINA Lindl.

A tall Australian shrub or small tree with pendulous branches and willowlike phyllodes up to 5 inches long. The flowers are in short racemes of two or three globular heads.

75607. ACACIA SPECTABILIS A. Cunn.

A tall shrub, native to Australia, with feathery compound leaves and golden-yellow flower heads in axillary racemes longer than the leaves, the terminal racemes forming large panicles.

75608. ACACIA SPECTABILIS STUARTII Benth.

A variety of this beautiful golden-flowered shrub with narrower leaflets than the usual form.

75609. ACACIA SUAVEOLENS (J. E. Smith) Willd.

An Australian shrub up to 6 feet high, with only a few slender branches. The linear leaves are four times the length of the small axillary spikes which bear clusters of yellow flowers and red bracts.

For previous introduction see No. 48066.

75610. ACACIA UNDULAEFOLIA A. Cunn.

A shrub, native to New South Wales, which has numerous ovate phyllodes an inch in length and long pendulous flowering branches.

75611. ACACIA VESTITA Edwards.

A tall bushy shrub up to 20 feet high, native to New South Wales. The whole plant is softly pubescent, the phyllodes are obliquely elliptical and recurved falcate, while the small globular flower heads are in racemes longer than the phyllodes and form a terminal leafy panicle.

75612. ACACIA VISCIDULA Benth.

A tall shrub up to 15 feet high, native to New South Wales. The terete branches are covered with a glossy viscid gum, the phyllodes are linear and about 3 inches long, and the flower heads are solitary or in pairs in the axils.

75613 to 75655. EUCALYPTUS spp. Myrtaceae.

75613. EUCALYPTUS AFFINIS Deane and Maiden.

A tall tree up to 80 feet in height, native to New South Wales. The lanceolate-falcate leaves are 3 inches long, the flowers are in axillary clusters, and the fruits are ovate-truncate. The timber is valuable for ties and wheels.

75614. EUCALYPTUS ANDREWSI Maiden.

This New South Wales eucalypt is a tall tree often 3 feet in diameter, with broadly lanceolate leaves 6 inches long and hemispheric fruits. The timber is used for fencing.

75615. EUCALYPTUS BAILEYANA F. Muell.

A tall tree, native to Queensland, with narrowly lanceolate-falcate, dull-green leaves. The flowers are in small axillary umbels and the fruits are semiovate. The wood is light gray, very tough, and suitable for tool handles.

75616. EUCALYPTUS BEHRIANA F. Muell.

A tall shrub or small tree, native to Australia, with thick smooth ovate to lanceolate leaves less than 3 inches long. The flowers are borne in umbels which are gathered into axillary or terminal panicles and are followed by ovoid-truncate fruits.

75576 to 75655—Continued.

75617. EUCALYPTUS BICOLOR A. Cunn.

A large shrub or tree up to 40 feet in height, with drooping branches, native to Australia. The persistent bark is rough and hard, and the lanceolate leaves are about 5 inches long, The timber is hard, tough, durable, and easily worked; suited for ties, piles, etc.

75618. EUCALYPTUS BUPRESTIUM F. Muell.

A shrub up to 10 feet high, native to Western Australia. The narrowly lanceolate leaves are less than 3 inches long, and the umbels of 6 to 10 flowers are attractive to bees.

75619. EUCALYPTUS CAMPHORA R. T. Baker.

A small tree up to 30 feet in height, native to New South Wales. The ovate to lanceolate leaves are 4 to 6 inches long and the flowers, in axillary clusters, are followed by small turbinate fruits. A valuable essential oil is produced by this variety.

75620. EUCALYPTUS CONSIDENEANA Maiden.

A medium-sized tree, native to New South Wales, with lanceolate-falcate leaves 9 inches long by 2 inches wide and pyriform fruits.

75621. EUCALYPTUS CORYMBOSA J. E. Smith.

A medium-sized Australian tree with leathery lanceolate leaves and large corymbs of yellowish white fragrant flowers.

75622. EUCALYPTUS DAWSONI R. T. Baker.

A tall tree native to New South Wales, with smooth bark, oblong-lanceolate leaves 6 inches long and 3 inches wide, and flowers in large terminal corymbs. The timber is hard and coarse grained.

75623. EUCALYPTUS DEANEI Maiden.

A tall tree with smooth silvery bark, native to New South Wales. It closely resembles *Eucalyptus saligna*, from which it differs mostly in the broad leaves borne on the suckers.

75624. EUCALYPTUS DIVES Schauer.

A small tree up to 12 feet in height, native to New South Wales. The large cordate leaves are opposite, but tend to become alternate toward the tips of the branches. The flowers are borne in dense axillary umbels.

75625. EUCALYPTUS GONIOCALYX F. Muell.

A rough-barked tree which attains a good size, in some situations in Australia reaching a height of 300 feet and a diameter of 6 to 10 feet. The leaves of the adult tree are long and quite slender, the two sides being similarly colored, and the flowers, nearly stemless, are borne in small clusters on flattened stalks. This species grows well in the coast regions of California, but, so far as known, it has not been tested in the dry, hot valleys of the interior, or other similar situations. In Australia it is found at altitudes of 4,000 feet and is therefore a promising species on the mountains of the southwestern United States. The hard tough wood is used for general building purposes, and because of its durability in the ground it is useful for railroad ties, posts, and other underground situations.

For previous introduction see No. 38716.

75626. EUCALYPTUS EUGENIOIDES Sieber.

A tall tree, native to New South Wales, with fibrous bark, thick oblique leaves 2 to 6 inches long, flowers in axillary clusters of 6 to 12, and ovoid fruits one-fourth of an inch in diameter.

75576 to 75655—Continued.

75627. EUCALYPTUS EXIMIA Schauer.
Mountain bloodwood.

A large tree, native to New South Wales, with scaly bark, falcate-lanceolate leaves, and urn-shaped fruits. The wood is soft and used only for fuel. It is a stately tree and very beautiful when in full bloom.

75628. EUCALYPTUS HAEMASTOMA J. E. Smith.

A large tree with a smooth mottled trunk, coriaceous, lanceolate-falcate leaves, small flowers in axillary clusters of small terminal panicles, and small globular or pear-shaped fruits less than half an inch in diameter.

75629. EUCALYPTUS INCRASSATA DUMOSA Maiden.

For previous introduction and description see No. 75562.

75630. EUCALYPTUS LAEVOPINEA R. T. Baker.

A tall tree, native to New South Wales, with ovate leaves 3 inches long and axillary umbels of five to six flowers followed by hemispherical fruits. The timber is hard, close-grained, durable under ground and suitable for posts, rails, or general building purposes.

75631. EUCALYPTUS LEUCOXYLON MACROCARPA J. E. Brown.

A tall tree, native to South Australia, with rough bark on the trunk but soft and white on the branches. The thick coriaceous leaves are lanceolate-falcate, and 3 to 6 inches long. The white or pink flowers are in long-stalked clusters of two to five, and the obovoid fruits are truncate.

75632. EUCALYPTUS LUEHMANNIANA F. Muell.

An Australian tree up to 20 feet high, with falcate-lanceolate, coriaceous leaves 3 to 6 inches long and 1 to 2 inches wide.

75633. EUCALYPTUS MACRORHYNCHA F. Muell.

A tall Australian tree with fibrous bark and narrow falcate leaves 3 to 5 inches long, the lower ones broader and more coriaceous. The axillary peduncles bear six to eight flowers, and the flattened globose fruits have a broad prominent rim.

75634. EUCALYPTUS MACULOSA R. T. Baker.

An Australian tree, 40 to 60 feet high, with smooth bark, falcate narrowly lanceolate leaves 2 to 3 inches long, flowers in axillary clusters of 4 to 16, and turbinate fruits.

75635. EUCALYPTUS MAIDENI F. Muell.

A tall tree up to 200 feet high, native to New South Wales, with bluish gray bark and broadly lanceolate leaves chalk white underneath. The timber is used for posts and fencing and for rough lumber.

75636. EUCALYPTUS MARGINATA J. E. Smith.

An Australian shrub or small tree often clear of branches for two-thirds of its height. The hard, durable wood is used for timber, piles, and railway ties. The tree will grow in a great variety of soils, but prefers moist, well-drained situations.

For previous introduction see No. 48991.

75637. EUCALYPTUS MEGACARPA F. Muell.

A Western Australian tree up to 100 feet high, with grayish white bark, thick lanceolate smooth leaves up to 6 inches in length, and thick hard depressed-globular fruits about an inch in diameter.

For previous introduction see No. 48992.

75576 to 75655—Continued.

75638. EUCALYPTUS MICROTHECA F. Muell.

A tree up to 80 feet high, found in the most arid extratropical as well as tropical inland regions of Australia. It grows best in ferruginous-gravelly soil, perfectly drained, and withstands unscorched a frequent heat of 156° F. in central Australia, yet it was not affected by exceptionally severe frosts, 18°, in the south of France when many other species of Eucalyptus suffered. It is said to be one of the best trees for desert tracts. The wood is brown, sometimes very dark, hard, heavy, and elastic, and is used for piles, bridges, and railway sleepers. Because of its attractive markings it is also used for cabinetwork.

75639. EUCALYPTUS MORRISH R. T. Baker.

A shrub up to 15 feet high, native to New South Wales. The lanceolate leaves are 6 inches long and an inch wide; the flowers are in axillary clusters of three to seven; and the fruits are hemispherical with a pyramidal top.

75640. EUCALYPTUS OBLIQUA L'Her.
Messmate gum.

An immense tree up to 200 feet high, native to Australia, which grows on poor stony ranges or on barren sandy soils if not subjected to prolonged drought. The wood is useful for railway sleepers, and, being practically noninflammable, it is especially suitable for underground railways. It is also used in harbor construction.

For previous introduction see No. 54506.

75641. EUCALYPTUS OCCIDENTALIS Endl.

A spreading shrub or small tree, native to Western Australia, with lanceolate leaves up to 5 inches long, yellowish or orange flowers, and bell-shaped fruits with a spreading rim. The timber is hard, strong, durable, and is much used for posts, fence rails, etc.

For previous introduction see No. 48993.

75642. EUCALYPTUS PANICULATA J. E. Smith.

A tall or medium-sized Australian tree with deeply furrowed gray-brown bark. The lanceolate-acuminate leaves are 3 to 5 inches long, and the flowers are borne in panicles or in axillary clusters. The wood is pale and very hard; it is valuable for ties, fencing, and building purposes.

75643. EUCALYPTUS PARVIFOLIA Cambage.

A small tree up to 30 feet high, native to New South Wales, with leaves 3 inches long, and flowers in umbels of five to six, followed by truncate globular fruits. The wood is pale pink, but it is soft and brittle.

75644. EUCALYPTUS PAUCIFLORA Sieber.
White gum.

An Australian tree 100 feet in height and about 4 feet in diameter. It grows well in swampy lowlands, and the timber is used for general building purposes.

For previous introduction see No. 61833.

75645. EUCALYPTUS PLATYPHYLLA F. Muell.

A handsome Australian tree with smooth white bark and light-green ovate leaves sometimes 10 inches long and broad but usually smaller. The flowers are in small axillary clusters, and the small obconical fruits have a thick prominent rim.

75646. EUCALYPTUS POPULIFOLIA Desf.
Poplar box.

A compact straight-growing Australian tree up to 50 feet high, with lustrous intensely green ovate leaves 4 inches long and panicles of small white flowers followed by very small fruits.

75576 to 75655—Continued.

75647. EUCALYPTUS PROPINQUA Deane and Maiden.

A large tree 120 feet high and 5 feet in diameter, native to New South Wales. The lanceolate leaves are 5 inches long, and the timber is durable either in or out of the ground.

75648. EUCALYPTUS REDUNCA Schauer.

A shrub or tree which reaches a height of 120 feet in Western Australia where it is native. It furnishes a pale hard particularly tough and durable timber, much prized for building purposes, various implements, etc. The seasoned wood weighs about 70 pounds per cubic foot.

For previous introduction see No. 48998.

75649. EUCALYPTUS REGNANS F. Muell. **Giant gum.**

An Australian tree up to 325 feet high. The trunk is very straight and whitish, and the narrow leaves, shining on both sides, are of rather thin texture. The wood is well adapted for shingles, planking, and general construction.

For previous introduction see No. 56567.

75650. EUCALYPTUS SALIGNA J. E. Smith.

A tall tree with silvery gray bark, native to New South Wales. The narrowly lanceolate leaves are 4 to 6 inches long, and the clusters of four to eight flowers are on short peduncles.

75651. EUCALYPTUS SANTALIFOLIA F. Muell.

A large shrub or small tree, native to South Australia. The thick rigid nearly straight leaves are less than 3 inches long, and the large flowers are in axillary clusters. The fruit is nearly globular, about half an inch broad, and has a prominent convex rim.

75652. EUCALYPTUS SCOPARIA Maiden.

A slender tree up to 40 feet high, native to New South Wales. The bark is smooth and white, and the lanceolate leaves are 6 inches long and half an inch wide.

75653. EUCALYPTUS SMITHII R. T. Baker.

A tall tree up to 150 feet high and 2 to 5 feet in diameter, native to New South Wales. The bark on old trees is deeply furrowed and is dark gray to blackish up to the branches.

75654. EUCALYPTUS TRACHYPHLOIA F. Muell.

A medium-sized tree, native to Queensland, with dark-gray rugged bark, falcate-lanceolate leaves 4 to 6 inches long, and terminal panicles of small flowers.

75655. EUCALYPTUS VIRGATA Sieber.

A large Australian tree which is straight stemmed, 150 feet in height, and has a diameter of 5 feet. It has done well in the cool climate of southern New Zealand. The wood is of excellent quality, strong and elastic, and is used for shipbuilding, fencing, and general building purposes. It burns well even when freshly cut.

For previous introduction see No. 56574.

75656. TRIFOLIUM REPENS RUBESCENS Seringe. Fabaceae.

From Scotland. Plants obtained from T. A. Anderson, Director of the Midlothian Seed-Testing and Plant-Registration Station, Scotland Board of Agriculture, at East Craigs, Corstorphine, through A. J. Pieters, Bureau of Plant Industry. Received October 28, 1927.

A form of white clover which has rosy flowers.

75657. GLADIOLUS sp. Iridaceae.

From Vicosa, Minas Geraes, Brazil. Bulbs presented by Prof. P. H. Rolfs, Director of the Escola Superior de Agricultura e Veterinaria. Received January 17, 1927. Numbered in December, 1927.

From near the Pico das Bandeiras, one of the peaks of the Serra de Caparao, at an altitude of about 2,000 meters. The flower is deep rose, with a darker throat, and though not so large as most ordinarily cultivated varieties, the fact of there being 10 flowers open at the same time on the one stalk seems rather unusual. In cultivation every spike had three spikelets, with a varying number of blooms on a main spike and on the spikelets, a feature which should seem to make it good for breeding purposes. The first flowers on the side spikes were opening when the earliest ones on the main spike were past.

For previous introduction see No. 69898.

75658 to 75662.

From Richmond, Victoria, Australia. Seeds presented by F. H. Baker, through Harlan P. Kelsey, Salem, Mass. Received November 25, 1927.

75658. ACACIA CARDIOPHYLLA A. Cunn. Mimosaceae.

A small weeping Australian tree, said to be one of the most beautiful of the acacias.

For previous introduction see No. 56868.

75659. ACACIA DIFFUSA Lindl. Mimosaceae.

A yellow-flowered shrub native to Australia, with loosely scattered, sessile, linear phyllodia (leaflike stems) about an inch long.

For previous introduction see No. 46355.

75660. ACACIA VERNICIFLUA A. Cunn. Mimosaceae.

A slender, much-branched shrub, native to New South Wales, with leathery, very narrow phyllodia (leaflike stems) about 2 inches long, and deep-yellow flowers in small heads which are generally in pairs.

For previous introduction see No. 64806.

75661. CANDOLLEA GRAMINIFOLIA (Swartz) F. Muell. (*Stylidium graminifolium* Swartz). Candolleaceae.

A herbaceous perennial Australian plant with stiff grasslike leaves sometimes 6 inches long, growing in a tuft from the end of a very short stem, and scapes 6 to 18 inches long bearing simple racemes of pink flowers.

For previous introduction see No. 64807.

75662. STERCULIA DIVERSIFOLIA Don. Sterculiaceae. **Black kurrajong.**

A tall evergreen Australian tree with shining green leaves 2 to 6 inches long, which are variable in shape, being both deeply lobed and entire. The nearly ovoid fruits are up to 3 inches long, each containing about 20 seeds which, when ground, make an excellent substitute for coffee. The taproots of the young trees and the young roots of the old ones are used as food, and when boiled they have a flavor similar to that of turnips, but sweeter. Cattle and sheep are fond of the leaves and branches and have existed during long dry periods on scarcely anything else. A strong fiber, obtained from the bark, is used for making fishing nets.

For previous introduction see No. 70747.

75663 to 75695.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received November, 1927.

Nos. 75663 to 75671 were presented by the botanic garden, Hokkaido Imperial University, Sapporo, Hokkaido.

75663 to 75695—Continued.

75663. ACANTHOPANAX DIVARICATUM (Sieb. and Zucc.) Seem. Araliaceae.

A large deciduous spreading shrub of vigorous habit, up to 10 feet high. It is native to the mountains of Kiuschiu, Japan, and is very closely related to *Acanthopanax sessiliflorum*, cultivated in European gardens for its handsome, dark-green leaves and spherical heads of inky black fruits. Unlike the latter, this species has downy young shoots, and the lower surfaces of the leaves are also quite downy. It may prove hardy in all but the coldest parts of the United States.

For previous introduction see No. 58612.

75664 to 75667. ACER spp. Aceraceae. **Maple.**

75664. ACER GINNALA Maxim. **Amur maple.**

A small tree or large shrub, of bushy habit, with 3-lobed slightly heart-shaped leaves, and very fragrant white flowers in short panicles, appearing in May. This maple is closely allied to *Acer tataricum*, but differs markedly in shape of leaf. The foliage turns a beautiful red before falling, the species being one of the best for autumnal coloring. It is native to Manchuria and Japan.

For previous introduction see No. 69878.

75665. ACER MIYABEI Maxim.

A deciduous Japanese tree, 30 to 40 feet high, with a trunk 1½ feet in diameter, deeply 3-lobed leaves, yellow downy flowers in corymbs 2 to 3 inches long, and keys up to an inch long.

For previous introduction see No. 43811.

75666. ACER PICTUM MONO (Maxim.) Pax

A deciduous Chinese tree up to 60 feet high, with leaves somewhat heart-shaped.

For previous introduction see No. 72402.

75667. ACER PSEUDO-SIEBOLDIANUM Komar.

A small Manchurian tree with cordate leaves divided into 9 to 11 lanceolate-serrate lobes and bearing purple flowers.

75668. ADONIS AMURENSIS Regel and Radde. Ranunculaceae.

Variety *yezoensis*. A beautiful herbaceous perennial with broad yellow flowers and finely divided leaves. Native to Japan.

75669. ALNUS FRUTICOSA Rupr. Betulaceae. **Alder.**

A shrub or small tree up to 30 feet high, native to northeastern Asia. The leaves are ovate with a cuneate base and are glabrous on the under side.

75670. ARALIA ELATA (Miquel) Seem. Araliaceae.

A small hardy Manchurian tree, resembling *Aralia spinosa* (Hercules-club) but more treelike, with few spines. It does not form many branches, but the large bipinnate leaves cast a good shade. The greenish white flowers are borne in large panicles, and the berries are dark red when ripe, producing a pleasing effect.

For previous introduction see No. 65486.

75671. BETULA JAPONICA Sieb. Betulaceae. **Japanese white birch.**

A hardy ornamental Japanese tree up to 75 feet high, with broadly oval leaves, which is closely related to *Betula pendula*.

For previous introduction see No. 72407.

75663 to 75695—Continued.

75672. CELASTRUS ARTICULATUS Thunb. Celastraceae. **Oriental bittersweet.**

No. 21. Collected near Ishiyama, south of Sapporo, Hokkaido, October 12, 1927. A woody Japanese vine with obovate-serrate leaves 2 to 4 inches long. The orange-yellow fruits open to show the scarlet arils surrounding the seeds.

For previous introduction see No. 40568.

Nos. 75673 to 75695 were presented by the botanic garden, Hokkaido Imperial University, Sapporo, Hokkaido.

75673. EUONYMUS OXYPHYLLUS Miquel. Celastraceae.

A Japanese shrub or small tree with ovate pointed leaves and many-flowered cymes of dark-red ribbed fruits and bright red seeds.

75674. FRAGARIA HNUMAE Makino. Rosaceae. **Strawberry.**

A wild strawberry native to the alpine slopes of Japan. It resembles *Fragaria vesca*, but has the flower stalks usually shorter than the leaves, the flowers with seven petals, and the achenes embedded in the receptacle.

75675. GERANIUM ERIANTHUM DC. Geraniaceae.

A herbaceous perennial plant with five to seven palmately lobed leaves and rose-purple flowers 1 to 2 inches across. Native to Kamchatka and northwestern North America.

75676. JUGLANS SIEBOLDIANA CORDIFORMIS (Maxim.) Mak. Juglandaceae. **Flat walnut.**

A form of the Japanese walnut which has heart-shaped, thin-shelled fruits with sharp edges and a groove in the middle of each flat side. The tree is often 70 feet tall.

75677. LILIUM CORDIFOLIUM Thunb. Liliaceae. **Lily.**

A Japanese lily, 3 to 4 feet high, with pendulous leaves 12 to 18 inches long and wide, and a raceme of 4 to 10 fragrant white flowers often 6 inches long. These seeds were received as *Lilium glehni*, which is said to differ very slightly from typical *L. cordifolium*.

75678. LILIUM DAURICUM Ker. Liliaceae. **Candlestick lily.**

A plant about 3 feet in height, with a smooth or slightly furrowed stem which is green or tinged with brown or purple. The 20 to 50 horizontal leaves are 3 to 5 inches long, and the flowers, one to four in a cluster and 3 to 5 inches across, are orange-red, slightly spotted with purplish black, and tinged with yellow in the center; the anthers are red.

For previous introduction see No. 69021.

75679. MAGNOLIA KOBUS BOREALIS Sargent. Magnoliaceae.

A pyramidal Japanese tree often 80 feet high. The obovate leaves are 6 inches long, and the pure creamy white flowers are 7 inches across. This is one of the hardiest of the Asiatic magnolias.

75680. PINUS KORAIENSIS Sieb. and Zucc. Pinaceae. **Korean pine.**

A 5-needle pine, up to 100 feet high, native to Korea and Japan. It produces valuable lumber and edible seeds and is also of ornamental value, being slow in growth and forming a dense broad pyramidal head with handsome foliage.

For previous introduction see No. 71125.

75663 to 75695—Continued.

75681. PINUS PARVIFLORA Sieb. and Zucc. Pinaceae. **Japanese white pine.**

A dense pyramidal Japanese 5-needle pine often 100 feet high, with slender horizontal branches. The leaves are stiff and twisted, forming dense brushlike tufts at the ends of the branchlets. The cones are reddish brown and very decorative.

75682. PRIMULA JAPONICA A. Gray. Primulaceae. **Japanese primrose.**

A herbaceous perennial with radical leaves and flower stalks up to 2 feet high, bearing several whorls of purple flowers. Native to Japan.

75683. PRIMULA SIEBOLDI E. Morr. Primulaceae. **Primrose.**

A Japanese primrose which is pubescent everywhere except the corolla and which has petioled, ovate leaves with numerous dentate lobes. The flower stem is longer than the leaves and bears a many-flowered umbel of white, rosy, or purple flowers nearly 2 inches across.

75684. PRUNUS MUME Sieb. and Zucc. Amygdalaceae. **Japanese apricot.**

The Japanese apricot is found throughout Japan, where it is both wild and cultivated. It ranges in height from 10 to 25 feet. Before the leaves appear in the spring the tree is covered with a profusion of attractive blossoms which are white in the wild forms, while in the cultivated varieties the color varies from white to pink, with occasional tinges of green or yellow. The fruits ripen in June; they are exceeding sour and are eaten only in the form of pickles.

75685. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Makino (*P. sargenti* Rehder). Amygdalaceae. **Sargent cherry.**

A hardy vigorous Japanese wild cherry with single pink flowers. The tree is tall and very attractive.

For previous introduction see No. 73881.

75686. PTEROCARYA SORBIFOLIA Sieb. and Zucc. Juglandaceae. **Wingnut.**

A Japanese tree nearly 100 feet high, with large compound leaves and long racemes of winged fruits.

75687. QUERCUS MONGOLICA GROSSESERRATA (Blume) Rehd. and Wils. Fagaceae. **Oak.**

The principal timber oak of Japan, often 100 feet high, with large handsome leaves clustered at the ends of the branches.

75688. QUERCUS SERRATA Thunb. (*Q. glandulifera* Blume). Fagaceae. **Oak.**

A white oak up to 70 feet high, native to Japan, Chosen, and China. The oblong-ovate leaves are lustrous bright green and hold their color until late in autumn. It is usually shrubby under cultivation.

75689. RHAMNUS JAPONICA Maxim. Rhamnaceae. **Buckthorn.**

A Japanese shrub up to 9 feet high, with glossy pale-green leaves 1 to 3 inches long, an abundance of greenish brown flowers produced during May in dense clusters at the ends of the short branches, and round fruits one-fourth of an inch in diameter.

For previous introduction see No. 43874.

75690. RHODODENDRON DAURICUM L. Ericaceae. **Dahurian rhododendron.**

An upright, deciduous shrub about 6 feet high, native to Japan and Chosen. The dark-green ovate leaves are aromatic, and the large rosy purple flowers appear from buds at the ends of the branchlets, usually before the leaves develop.

For previous introduction see No. 65503.

75663 to 75695—Continued.

75691. ROSA MULTIFLORA Thunb. Rosaceae. **Japanese rose.**

A vigorous climbing Japanese rose with small white flowers in pyramidal corymbs, also small red fruits.

For previous introduction see No. 65477.

75692. SORBUS PSEUDOGRACILIS (C. Schneid.) Koehne. Malaceae.

A Japanese shrub which has compound leaves of 9 to 11 ovate-lanceolate, dark-green leaflets, clusters of small white flowers, and red fruits.

75693. STEWARTIA PSEUDO-CAMELLIA Maxim. Theaceae.

A handsome Japanese tree, 50 feet high, with erect branches and red bark. The thickish obovate-lanceolate leaves are bright green, and the large white flowers are borne in summer.

75694. TILIA MAXIMOWICZIANA Shiras. Tiliaceae. **Linden.**

A tall tree, up to 100 feet high, native to Japan. The broadly ovate, sharp-pointed leaves are 6 inches long, and the small flowers are borne in clusters of 10 to 18.

75695. TRIGONOTIS GUILIELMI A. Gray. Boraginaceae.

An erect herbaceous perennial with ovate leaves and lax racemes of white flowers less than an inch across. Native to Japan.

75696. BOUGAINVILLEA sp. Nyctaginaceae.

From Hope, Kingston, Jamaica, British West Indies. Plants presented by H. H. Cousins, Director of the Department of Agriculture. Received July 14, 1926. Numbered in December, 1927.

A variety with pink bracts which are not such a clear color as those of the Rose of Catalina.

75697. ASTREBLA TRITICOIDES (Lindl.) F. Muell. Poaceae. **Curly Mitchell grass.**

From Sydney, New South Wales, Australia. Seeds presented by Arthur Yates & Co. Received December 1, 1927.

According to the Agricultural Gazette of New South Wales for March, 1922, curly Mitchell grass is characterized by wheatlike husks surrounding the seeds. The leaves are wide and succulent and the plants quickly respond to rain, a second growth of leaves being produced almost immediately. The best growth is made in summer and autumn, the period of growth from sowing until flowering being only a few weeks. This species is considered one of the best pasture grasses of Australia.

75698. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

From Alamos, Sonora, Mexico. Seeds obtained through L. H. Dewey, Bureau of Plant Industry. Received December 6, 1927.

This close relative of the kapok tree (*Ceiba pentandra*) is described by P. C. Standley (contributions from the United States National Herbarium, vol. 23, pt. 3) as a large or medium-sized tree with a greenish spiny trunk, compound leaves, and hard oblong fruits about 7 inches long which contain whitish down used for insulation, for stuffing pillows, mattresses, and life preservers, and for making candlewicks. It is native to western and southern Mexico.

For previous introduction see No. 73079.

75699 to 75717.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received in December, 1927.

75699. ALNUS PENDULA Matsumura. Betulaceae. **Alder.**

Nos. 161 and 183. Collected on Otaniyama, Shino Mura, Minamikuwata Gun, Tamba, November 2, 1927. *Hage shibari.* A graceful Japanese shrub or small tree up to 25 feet high. The sharply serrate, dark-green leaves are oblong with long points, and the small, conelike fruits are on slender pedicels in pendulous racemes.

75700 to 75711. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

Locally grown varieties from Shino Mura, Minamikuwata Gun, Tamba, near Kyoto, November, 1927.

75700 to 75706. Cultivated varieties.

75700. Nos. 147, 148, 170. *Ganne.*

75701. Nos. 149, 150, 171. *Ginyori, ginyose.*

75702. Nos. 151, 152, 175. *Shikanotsume.*

75703. Nos. 153, 154, 169. *Imakita.*

75704. Nos. 155, 156, 172. *Higan-guri.*

75705. Nos. 157, 158, 174, 179. *Chokoji.*

75706. Nos. 159, 160, 173. *Shimokatsugi.*

75707. No. 163. A wild variety, used as a stock, from the chestnut orchard at Oji, Shino Mura.

75708. No. 165. *Shiba-guri.* A wild variety collected on Otani Yama, Shino Mura.

75709. No. 166. *Shiba-guri.* From the orchard at Oji, Shino Mura.

75710. No. 167. *Shiba-guri.* A wild variety collected on Otani Yama, Shino Mura, at an altitude of about 600 feet.

75711. No. 168. A wild variety from the orchard at Oji, Shino Mura. Tree about 4 feet high, and stem half an inch in diameter.

Nos. 75712 to 75715 are seeds collected on Otani Yama, Shino Mura, Minamikuwata Gun, Tamba, November 2, 1927.

75712. EUONYMUS sp. Celastraceae.

No. 180. A wild variety, with showy red fruits, which will perhaps be useful in an arboretum.

75713. ILEX sp. Aquifoliaceae. **Holly.**

No. 181. *Soyogo, sayago.* A small evergreen tree.

75714. JUNIPERUS RIGIDA Sieb. and Zucc. Pinaceae. **Needle juniper.**

No. 162. *Nezumisashi, muro.* A Japanese juniper about 20 feet high, of elegant habit with the branches pendulous at the ends. The needlelike leaves are very slender and triangular in section. This tree thrives very well in southern England.

For previous introduction see No. 57298.

75715. RHODODENDRON sp. Ericaceae. **Azalea.**

No. 182. A wild ornamental shrub.

75716. ILEX SERRATA Thunb. Aquifoliaceae. **Fine-tooth holly.**

No. 184. November 12, 1927. *Umemodoki.* A red-berried Japanese shrub up to 15 feet high, growing in the wonderful old garden at Golden Pavilion, Kyoto. It is said to be rare.

75717. LILIUM sp. Liliaceae. **Lily.**

No. 164. A wild lily growing on Izuta Yama, Kochi Ken, Shikoku, November 10, 1927.

75718 to 75720.

From Santa Monica, Calif. Seeds presented by Hugh Evans, through Peter Bisset, Federal Horticultural Board. Received December 9, 1927.

75718. CERATOSTIGMA WILLMOTTIANUM Stapf. Plumbaginaceae.

A half-woody perennial, 1 to 3 feet high, with angled purplish stems, bristly leaves, and cobalt-blue flowers, an inch wide, borne successively in a large head. Native to western China.

For previous introduction see No. 72983.

75719. HIBISCUS DIVERSIFOLIUS Jacq. Malvaceae.

A tall, hairy, rigidly upright shrubby perennial with prickly stems, variable foliage, and yellow flowers which have dark-red centers. Native to tropical Africa and the Pacific Islands.

For previous introduction see No. 66506.

75720. HIBISCUS HETEROPHYLLUS Vent. Malvaceae.

A tall Australian shrub with leaves varying from linear to elliptic and from entire to three lobed, which are 5 to 6 inches long and white beneath. The large axillary flowers, 3 to 4 inches long, are white with a crimson eye. This shrub blooms freely and is very showy.

75721 and 75722. LILIUM spp. Liliaceae. **Lily.**

From Japan. Bulbs and seeds collected by R. K. Beattie, Bureau of Plant Industry. Received December 16, 1927.

Wild lilies growing among Sasa on a hillside in pine woods at Hirota, Shino Mura, Minamikuwata Gun, Tamba, November 15, 1927.

75721. LILIUM sp.

No. 185. Bulbs.

75722. LILIUM sp.

No. 186. Seeds.

75723. DIOSCOREA sp. Dioscoreaceae. **Yam.**

From Ceylon. Tuber collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March 26, 1926. Numbered in December, 1927.

No. 404. Agricultural Experiment Station, Jaffna, February 6, 1926. A variety said to be of good quality, which grows in sandy calcareous soil. It is called saddikarangi or elephant's foot because it produces only one large flat tuber with a few small ones attached to the side, the whole being about the size and shape of an elephant's foot.

75724. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From New Smyrna, Fla. Cuttings presented by John Y. Detwiler, through R. A. Young, Bureau of Plant Industry. Received December 4, 1927.

A guava with thick flesh which is sweet with a air amount of acid and comparatively small seeds. The specimen of fruit received, said to be one-third to one-half the size as compared with the average, was 3½ by 2¾ inches, yellow skinned and white fleshed, the flesh being nearly three-fourths of an inch thick.

75725 to 75733. LILIUM spp. Liliaceae. **Lily.**

From Tunbridge Wells, England. Bulbs purchased from R. Wallace & Co. Received in December, 1927.

75725 to 75733—Continued.

75725. LILIUM BURBANKII Hort.

A free-flowering hybrid lily said to be derived from *Lilium pardalinum* and *L. paryii*. It produces from 25 to 30 deliciously fragrant flowers on a very graceful spike. The flowers are spotted with chocolate and flushed with crimson on the tips of the petals.

75726. LILIUM DAVIDI Duch.

A strong-growing Chinese lily about 5 feet high, with graceful narrow foliage and deep cinnabar-red tiger lilylike flowers.

75727. LILIUM FARRERI Turrill.

A beautiful species found in Yunnan, China, by the well-known botanical explorer, Reginald Farrer, and frequently referred to in his writings as "the marble Martagon lily." It is a slender and graceful lily, 2 to 3 feet high, bearing, on long pedicels, up to five recurved white flowers which are slightly spotted with purple on the interior. This lily possesses a strong constitution and increases fast by means of numerous small bulbs forming at the base of the stem.

For previous introduction see No. 61747.

75728. LILIUM MARTAGON L. **Martagon lily.**

Variety *album*. A rare lily producing spikes 4 to 5 feet high, and 20 to 30 pure white flowers.

75729. LILIUM OCHRACEUM Franch.

A rare and beautiful lily from Upper Burma, not hardy except in the most favored districts; it is an admirable cool greenhouse plant. This is a very variable species, producing flowers which range in color from deep golden to pale yellow, stained in varying degrees with a deep wine purple. The petals recurve as in *Lilium martagon*, but this feature is also inconstant.

75730. LILIUM POMPONIUM L.

A graceful Martagon lily from northern Italy, 3 feet high, with slender grassy foliage and up to 10 turban-shaped, brilliant-scarlet flowers. This is a rare lily in cultivation.

75731. LILIUM PYRENAICUM Gouan.

Yellow Turkscap. A very early variety with enormous bulbs. The strongly scented yellow flowers are heavily spotted with black.

For previous introduction see No. 69926.

75732 and 75733. LILIUM DAURICUM Ker. **Candlestick lily.**

75732. *Golden fleece*. A strong-growing variety 2½ feet high, producing large umbellate heads of clear golden-yellow flowers with a touch of scarlet at the tips of the petals.

75733. *Splendidum*. A new variety, 2 to 2½ feet high, producing large umbellate heads of brilliant vermilion flowers shading to a rich coppery crimson. The flowers are unspotted or nearly so, and the points of the petals are slightly reflexed.

75734. LILIUM MONADELPHUM Bieb. Liliaceae. **Great Caucasian lily.**

From the Caucasus, Russia. Bulbs purchased from J. W. Pincus, of the Amtorg Trading Corporation, New York, N. Y. Received December 14, 1927.

Variety *szovitzianum*. A variety with reddish brown anthers and lemon-yellow flowers which are larger and more thickly dotted than the typical species.

For previous introduction see No. 72611.

75735 to 75749.

From Leningrad, Russia. Seeds presented by Prof. V. V. Talanoff, vice director of the Institute of Applied Botany, through H. N. Vinall, Bureau of Plant Industry. Received December 10, 1927.

Locally grown varieties from the Western Siberian Experiment Station at Omsk.

75735. AGROPYRON SIBIRICUM (Willd.) Beauv. Poaceae. **Grass.**

No. 1342. An upright cespitose perennial grass, up to 16 inches high, with linear leaves. Native to southern Russia and the Caucasus.

For previous introduction see No. 63802.

75736 to 75738. ELYMUS spp. Poaceae. **Grass.**

75736. ELYMUS DAHURICUS Turcz.

No. 1767. A tall perennial ryegrass, with stout erect stems, native to dry stony places in Russia and Siberia.

For previous introduction see No. 64625.

75737. ELYMUS JUNCEUS Fisch.

No. 1800. An erect perennial grass, with terminal spikes resembling rye; native to Russia.

75738. ELYMUS SIBIRICUS L.

No. 1310. A tall grass with heavy overhanging heads.

For previous introduction see No. 57685.

75739. FESTUCA ELATIOR L. Poaceae.

No. 1582. **Meadow fescue.**

75740 to 75747. MEDICAGO FALCATA L. Fabaceae. **Yellow-flowered alfalfa.**

75740. No. 5198.
75741. No. 4022.
75742. No. 4020.
75743. No. 1694/46.
75744. No. 5038.
75745. No. 1694/18.
75746. No. 40/27.
75747. No. 63/82.

75748. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

No. 1450. From Bokhara.

75749. ONOBRYCHIS VULGARIS Hill (*O. viciaefolia* Scop.) Fabaceae. **Sainfoin.**

No. 1517.

75750 and 75751.

From Chicago, Ill. Plants presented by August Koch, superintendent of Union Park. Received December 30, 1927.

75750. CARYOTA PLUMOSA Hort. Phoenicaceae. **Fishtail palm.**

From seeds collected in Brazil. A horticultural name applied to a form of fishtail palm which is now about a foot high, with leaves resembling those of *Caryota mitis* and *C. urens*.

75751. FICUS PLATYPHYLLA Delile. Moraceae.

From seeds collected on the Gold Coast, West Africa. A handsome shade tree, 80 feet in height and 8 feet in diameter, with dark-green stiff leathery leaves, about 10 inches long, arranged in picturesque groupings on the branches. This tree is said to be the source of Kano rubber. The latex is used as birdlime, and tannin is obtained from the bark. A fabric is made from the bast by some of the natives of central Africa.

For previous introduction see No. 73118.

75752. CRYPTOSTEGIA sp. Asclepiadaceae.

From Madagascar. Seeds presented through Paul Dean Thompson, American vice consul at Tananarive. Received December 21, 1927.

A wild cryptostegia which may be of value as a rubber plant.

75753. PAUROTIS sp. Phoenicaceae. **Palm.**

From Georgetown, British Guiana. Seeds presented by the British Guiana Botanic Gardens, through Dr. B. E. Dahlgren, of the Field Museum of Natural History, Chicago, Ill. Received January 18, 1923. Numbered in December, 1927.

A small palm suitable for growing as a house plant.

75754. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Nanking, China. Seeds purchased from Prof J. H. Reisner, College of Agriculture and Forestry of the University of Nanking. Received December 31, 1927.

In the endeavor to relieve the situation caused by the rapid disappearance of our native chestnut, due to the ravages of the blight fungus, the Chinese hairy chestnut is being introduced into this country in a considerable quantity. The size and quality of the nuts compare rather favorably with that of our native chestnut, although neither the size of the tree nor the tannin content measure up to those of our native species.

For previous introduction see No. 74157.

75755 and 75756.

From Lisbon, Portugal. Cuttings presented by Dr. Ruy Palhinha, of the University of Lisbon. Received December 23, 1927.

75755. ROSA ODORATA GIGANTEA × sp.

Belle Portugaise. A large and beautiful rose of very delicate coloring, rosy pearl tinted with salmon. The very long buds are at times 10 centimeters in length, especially when produced at the ends of vigorous shoots. The fully opened flower measures 15 to 16 centimeters in diameter. When grown in a mild climate, Belle Portugaise reaches a great size and is literally covered with its huge flowers. It seems to have inherited in its characters the great floriferousness of its mother, *Souvenir de Leoine Viennot;* and furthermore, it is capable of producing fertile seeds, and therefore, may be used in hybridization.

For previous introduction see No. 29729.

75756. ROSA ODORATA GIGANTEA × sp.

Etoile du Portugal. A hybrid of *Rosa odorata gigantea* and *Reine Marie Henriette.*

For previous introduction see No. 29730.

75757 to 75765. ZEA MAYS L. Poaceae. **Corn.**

From India and Java. Seeds collected by F. G. Krauss, of the University of Hawaii. Received November 30, 1927.

75757 to 75759. From the experiment station at Pusa, India, August, 1927.

75757. No. 1. An early maturing variety.

75758. No. 2. A midseason variety.

75759. No. 3. A late-maturing variety.

75760 and 75761. From Buitenzorg, Java.

75760. *Gele oost.*

75761. *Gele menado.*

75757 to 75765—Continued.

75762. A Himalayan variety collected in Darjiling, India, at an altitude of 7,000 feet. August, 1927.

75763 to 75765. From Buitenzorg, Java.

75763. *Saipancorn.*

75764. *Witte midden.*

75765. *Witte St. Croix.*

75766. XANTHOSOMA sp. Araceae. **Yautia.**

From Akkra, Gold Coast, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 19, 1927. Numbered in December, 1927.

No. 1217. *Coco yam.* Obtained in the market, February 27, 1927. A dasheen relative with unusually large tubers.

75767 to 75774. LILIUM spp. Liliaceae.

From Tunbridge Wells, England. Bulbs purchased from R. Wallace & Co. Received in December, 1927.

75767. LILIUM BURBANKII Hort.

For previous introduction and description see No. 75725.

75768. LILIUM CHALCEDONICUM L. **Chalcedonian lily.**

Variety *maculatum.* A strong-growing, rare form superior to the ordinary type. The large broad-petaled flowers are dark scarlet, spotted with black at the base of the petals.

75769 to 75772. LILIUM DAURICUM Ker. **Candlestick lily.**

75769. *Golden fleece.* For previous introduction and description see No. 75732.

75770. *Mahogany.* A very fine distinct new hybrid with large flowers of deep crimson lake.

75771. *Splendidum.* For previous introduction and description see No. 75733.

75772. *Vermilion brilliant.* A very showy hybrid producing large heads of the most intense vermilion-scarlet flowers of fine form and substance, with broad massive petals.

75773. LILIUM PARDALINUM Kellogg. **Leopard lily.**

Variety *Johnsoni.* A tall lily from British Columbia, producing bright-orange flowers spotted with dark crimson.

75774. LILIUM POMPONIUM L. **Lily.**

For previous introduction and description see No. 75731.

75775 to 75779.

From Buenos Aires, Argentina. Seeds presented by Prof. Lorenzo R. Parodi, of the University of Buenos Aires. Received December 13, 1927.

75775. CHLORIS BEYRICHIANA Kunth. Poaceae. **Grass.**

A low perennial grass with short leaves and erect flower stems a foot high. Native to Brazil and Argentina.

75776. CHLORIS POLYDACTYLA (L.) Swartz. Poaceae. **Grass.**

A grass which grows about 1½ feet high with seed stalks running up to 3 feet. It seeds profusely and is said to be good as a pasture grass when young and appears to be suitable for hay.

75775 to 75779—Continued.

75777. GOUINIA LATIFOLIA Vasey. Poaceae. **Grass.**

A tall perennial grass up to 6 feet high, with leaves an inch wide and a foot long, and loosely branching panicles. Native to Argentina.

75778. PHALARIS ANGUSTA Nees. Poaceae. **Grass.**

A coarse annual grass 4 feet high with narrow leaves and timothylike spikes. Native to Argentina.

75779. TRICHLORIS PLURIFLORA Fourn. Poaceae. **Grass.**

A perennial grass 2 to 4 feet high with leaves half an inch wide and a foot long. Native to Mexico.

75780. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). Rutaceae. **Grapefruit.**

From Manila, Philippine Islands. Bud wood presented by S. Youngberg, Director of the Bureau of Agriculture. Received November 4, 1927.

A local variety.

75781. RUBUS sp. Rosaceae.

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director of the Bureau of Agriculture. Received December 14, 1927.

A variety grown at Baguis, Mount Province, Luzon, Philippine Islands.

75782. SYRINGA OBLATA DILATATA (Nakai) Rehder. Oleaceae. **Lilac.**

From Chosen, Japan. Seeds presented by Dr. M. Tozawa, Director of the Forestry Experiment Station at Keijyo. Received January 4, 1927. Numbered in December, 1927.

A hardy compact shrub, native to northeastern Asia, about 12 feet high, with heart-shaped, bright-green leaves and dense panicles of pale-lilac flowers.

For previous introduction see No. 66259.

75783 to 75787.

From northern Nigeria, West Africa. Seeds presented by A. G. Beattie, London, Ontario, Canada. Received December 12, 1927.

Locally grown varieties.

75783. PENNISETUM GLAUCUM (L.) R. Br. (*P. typhoideum* Rich.). Poaceae. **Pearl millet.**

Bulrush millet. The local name is coero.

75784 to 75787. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

75784. *Massakwa.*

75785. *A chi duka.*

75786. *Bai fillata.*

75787. *Giwar kumba.*

75788 to 75843.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received December, 1927.

75788 to 75825. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

75788. No. 193. A wild variety growing on Abura Yama, at Otani, Shino Mura, Minamikuwata Gun, Tamba. The tree is a 15-year-old sprout and is 15 feet high.

75788 to 75843—Continued.

75789 to 75802. Wild trees growing on Otani Yama, Shino Mura, Minamikuwata Gun, Tamba.

75789. No. 194.
75790. No. 195.
75791. No. 196.
75792. No. 197.
75793. No. 198.
75794. No. 199.
75795. No. 200.
75796. No. 201.
75797. No. 202.
75798. No. 203.
75799. No. 204.
75800. No. 205.
75801. No. 206.
75802. No. 207.

75803. Nos. 208–210, 236, 244, 245, 262, 264–266. Wild trees or rather bushes growing on Izuta Yama, Kochi Ken, Shikoku Island. They are said to produce three crops a year. These nuts are from the first crop which ripens in July.

75804. Nos. 211–213. Wild trees, 20 to 30 years old, growing in the university forest in Ashidani, Kamiyugawa, Yakata Mura, Arita Gun, Wakayama Ken.

75805. No. 214. *Shibaguri.* A wild tree said to be large, growing in the Kamikamo Experimental Forest, Kyoto Imperial University.

75806 to 75808. Cultivated trees growing at Ineyama, Ayabe-cho.

75806. No. 216. *Ichiemon.*

75807. No. 217. *Toyotama-wase.*

75808. No. 218. An unknown variety.

75809. No. 219. A wild tree growing at Ushigakubi, Kurama Yama, Kyoto Prefecture.

75810 to 75812. Wild trees growing at Kurama Yama, Kyoto Prefecture.

75810. No. 220.
75811. No. 221.
75812. No. 222.

75813. No. 223. A wild tree growing at Kurama Mura, Kurama, Momoiware.

75814 to 75816. Wild trees growing at Kurama Yama, Kyoto Prefecture.

75814. No. 224.
75815. No. 225.
75816. No. 226.

75817. No. 227. A wild tree growing at Otani Yama, Shino Mura, Minamikuwata Gun, Tamba.

75818. Nos. 228, 229. Wild trees growing at Ishikari, Ishiyama Province.

75819. Nos. 230 and 239. An unnamed cultivated variety at Imai, Kagami Mura, Tosa Gun, Kochi Ken, Shikuko Island.

75820. Nos. 231 and 240. *Chobe.* Cultivated trees growing at Hirota, Shino Mura, Minamikuwata Gun, Tamba. This variety was exhibited at a fair in Kyoto and received third prize.

75821 to 75824. Cultivated trees growing at Ori, Kagami Mura, Tosa Gun, Kochi Ken, Shikoku Island.

75821. Nos. 232 and 242. A native variety.

75822. Nos. 233 and 243. *Naro-guri.* This variety is native to Shikoku.

75823. Nos. 234, 241, 261. *Nakayama-guri.* The burs fall from the tree before opening.

75824. No. 235. *Togenashi-guri.* The burs are spineless.

75788 to 75843—Continued.

75825. Nos. 237, 238. These seeds are from the same source as No. 208 [No. 75803], but the nuts are smaller and are said to come from smaller trees.

75826. LILIUM sp. Liliaceae. **Lily.**

No. 263. From Shizuoka Ken, Tagata Gun, Kitakano Mura, Kashiwakubo, November 25, 1927. A wild variety bearing white flowers spotted with brown.

75827 to 75843. RHODODENDRON spp. Ericaceae. **Azalea.**

Locally grown varieties collected in November, 1927.

75827. RHODODENDRON sp.

No. 188. A wild variety growing near the Buddhist Temple, Hirota, Shino Mura, Minamikuwata Gun, Tamba.

75828. RHODODENDRON sp.

No. 189. A cultivated yellow-flowered variety from the garden at the Buddhist Temple, Hirota, Shino Mura, Minamikuwata Gun, Tamba. It is said to be rare.

75829. RHODODENDRON sp.

No. 190. A cultivated variety growing at Hachiman Shrine, Mori, Shino Mura, Minamikuwata Gun, Tamba. It is said to have red flowers.

75830. RHODODENDRON sp.

No. 191. A cultivated variety growing in the garden at the Buddhist Temple, Hirota, Shino Mura, Minamikuwata Gun, Tamba. It is said to have red flowers.

75831. RHODODENDRON sp.

No. 192. A wild, pink-flowered variety, said to be rare, growing near the Buddhist Temple, Hirota, Shino Mura, Minamikuwata Gun, Tamba.

75832. RHODODENDRON sp.

No. 248. A wild variety growing near the Buddhist Temple, Hirota, Shino Mura, Minamikuwata Gun, Tamba. It is said to have white flowers.

Nos. 75833 to 75843 are cultivated varieties from the garden of the San-O-ji Buddhist Temple, Sogabe Mura, near Kameoka.

75833. RHODODENDRON sp.

No. 249. A variety said to have red flowers.

75788 to 75843—Continued.

75834. RHODODENDRON sp.

No. 250.

75835. RHODODENDRON sp.

No. 251.

75836. RHODODENDRON sp.

No. 252. A variety said to have white flowers.

75837. RHODODENDRON sp.

No. 253. A variety said to have pink flowers with white spots.

75838. RHODODENDRON sp.

No. 254. A variety said to have red flowers.

75839. RHODODENDRON sp.

No. 255. A variety said to have pink flowers.

75840. RHODODENDRON sp.

No. 256. A variety said to have large pink and white flowers.

75841. RHODODENDRON sp.

No. 257. A variety said to have very large pink flowers and to be the finest in the collection at this garden.

75842. RHODODENDRON sp.

No. 258. An azalea said to be an early variety with red flowers.

75843. RHODODENDRON sp.

No. 259. An azalea said to be a wild variety with very large flowers. It has been cultivated in this garden.

75844. THEA SASANQUA (Thunb.) Nois. (*Camellia sasanqua* Thunb.). **Theaceae.**

Nos. 246 and 247. Collected near Hachiman Shrine, Hirota, Shino Mura, Minamikuwata Gun, Tamba, November 15, 1927. A large, wide-spreading ornamental shrub or small tree common throughout the warmer parts of Japan. It is said to be a relative of the white camellia. The branches are very slender, and in the wild plant the flowers are always white. It is a popular garden shrub, and, under cultivation, the forms with pink and rose-colored flowers are common. The seeds contain an inferior sort of oil used by the Japanese women for dressing their hair.

For previous introduction see No. 57088.

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December 10, 1929

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This inventory is a contribution from

Bureau of Plant Industry	WILLIAM A. TAYLOR, *Chief.*
Office of Foreign Plant Introduction	KNOWLES A. RYERSON, *Principal Horticulturist, in Charge.*

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 94

Washington, D. C. ▼ Issued December, 1929

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1928 (NOS. 75845 TO 76453)

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INTRODUCTORY STATEMENT

This inventory, which records the materials passing through the Office of Foreign Plant Introduction from January 1 to March 31, 1928, is of interest to the reader as a promise of a great variety of ornamental plants that have been brought in for testing and eventual distribution. And here, even at the risk of tiresome repetition, it must be noted that the inventory is not a catalogue from which plants may be ordered. It is a historical document, a matter of record, and no more.

This particular inventory records another attempt to establish ornamental species of onions, which are said to be valuable for rock-garden planting. As their seeds are of short viability, their introduction in this way is always problematical.

The barberries were collected for specific use in studies conducted in the department and are not to be available for distribution.

Several oriental cherries are included in the general effort to make as complete a collection as possible of all the flowering varieties, which have been a special study of the office ever since their first introduction in 1903.

The various clematis species are more of botanical interest than horticultural value except *Clematis armandi* (No. 76013), a beautiful tender species which is not yet established in this country, and the hybrid (*C. montana rubens* × *vedrariensis rosea*, No. 76341) which should prove valuable if it in any way resembles its seed parent.

No genus of shrubs has called forth more comment in recent years than the cotoneasters, of which there are 16 in this list. The species are by no means of equal value and must be carefully compared to choose those of greatest garden merit. Among those mentioned here, *C. apiculata* (No. 76231) is of striking beauty with low spreading growth and large rosy red fruits, and *C. hupehensis* (No. 76234) is a fine red-fruited shrub of considerable vigor.

57537—29——1

The crotalarias (Nos. 75876 to 75882, 75970) are interesting legumes which seem promising for use in the South. Some of them are of striking appearance, but even so are more valuable as green-manure plants.

Cytisus species (Nos. 76035, 76241 to 76247) are being assembled for study to determine whether other species may not be of merit in portions of our country where those already established are useful. They may prove to be of peculiar value from the Middle Atlantic States southward.

No inventory is complete without mention of grasses, and this list gives proper attention to this huge plant family.

A large collection of honeysuckles is included in this list. These were assembled for study, for many, though distinct botanically, are of little ornamental value, and while several of the species here are far from new, they are so little grown that it was easiest to reintroduce them for the present study.

Wherever rhododendrons appear, interest is quickened. *Rhododendron campanulatum* (No. 75966) is one of the relatively newer oriental species which may prove of value in this country. The species (Nos. 76191 to 76195) were collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild. They represent some of the more recent fruits of the Ward collecting.

Final attention may be called to *Styrax wilsonii* (No. 76275), which seems to be a rather delicate plant somewhat like the familiar and very beautiful *S. japonica*, which, though old, has never been adequately appreciated. This, with two lilac species, *Syringa tomentella* (No. 76276) and *S. yunnanensis* (No. 76277), must suffice for the present comment and will show the efforts of the office to keep the interests of the ornamental horticulturists in mind.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., June 17, 1929.

INVENTORY[1]

75845. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Makino (*P. sargentii* Rehder). Amygdalaceae. **Sargent cherry.**

From Benenden, Kent, England. Cuttings presented by Capt. Collingwood Ingram. Received March 1, 1928.

Yamazakura (northern form). The mountain cherry of northern Japan, which under favorable conditions becomes a large tree 70 feet tall, with a spreading crown. It is hardy and long lived and is said to be one of the most handsome of the wild cherries of eastern Asia. The young foliage is bronze green, and the mature leaves assume brilliant colors in autumn, changing to shades of yellow, orange, and crimson. The numerous single flowers, pink or at times nearly white, are up to 4 centimeters across, and the black fruits are about the size of peas. An important feature of this wild cherry is the possibility of its use as a stock for cultivated forms, for which purpose it appears to be well suited.

For previous introduction see No. 73381.

75846. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From Tanganyika Territory, Africa. Seeds presented by A. H. Kirby, Director of the Department of Agriculture, Dar es Salaam. Received March 1, 1928.

Bonganhilo. A medium-early, semidwarf variety which gives a good yield.

75847. PHALARIS sp. Poaceae. **Grass.**

From San Remo, Italy. Roots presented by Dr. Mario Calvino. Received July 6, 1927. Numbered March, 1928.

From the western part of San Remo. A native perennial flat-bladed grass, said to be drought resistant.

75848. RADICULA ARMORACIA (L.) Robinson. Brassicaceae. **Horseradish.**

From Erfurt, Germany. Roots purchased from Haage & Schmidt. Received March 6, 1928.

A variety grown locally.

75849. RADICULA ARMORACIA (L.) Robinson. Brassicaceae. **Horseradish.**

From Erfurt, Germany. Roots purchased from Otto Putz. Received March 6, 1928.

A variety grown locally.

75850. LILIUM sp. Liliaceae. **Lily.**

From Japan. Bulbs collected by R. K. Beattie, Bureau of Plant Industry. Received December, 1927. Numbered January, 1928.

No. 262. From Shizuoka Ken, Tagata Gun, Kitakano Mura, Kashiwakubo. November 25, 1927. A wild variety bearing white flowers spotted with brown. Seeds of this lily were sent in under No. 263 [No. 75826].

75851. SALIX MATSUDANA Koidz. Salicaceae. **Willow.**

From Verrieres le Buisson, Seine et Oise, France. Plants purchased from Vilmorin-Andrieux & Co. Received February 2, 1928.

Variety *tortuosa*. The stem-growing points of this variety appear to have gone crazy, losing all sense of direction of gravity and light. The tree is striking in appearance and may have limited use as an ornamental, but it may prove to be especially useful in a physiological study on geotropism.

75852. ONOBRYCHIS VULGARIS Hill (*O. viciaefolia* Scop.). Fabaceae. **Sanfoin.**

From Edinburgh, Scotland. Seeds purchased from John Donaldson & Co. Received February 2, 1928.

A pink-flowered herbaceous perennial, 1 to 2 feet high, native to Europe.

For previous introduction see No. 72977.

75853. MESEMBRYANTHEMUM ANGULATUM Thunb. Aizoaceae.

From Paris, France. Seeds presented by Prof. D. Bois, of the Paris Museum of Natural History. Received January 27, 1928.

A herbaceous, procumbent South African plant with angular stems and branches. The leaves, which are opposite on the stem and alternate on the branches, are covered with minute white papillae.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

75854. MACADAMIA INTEGRIFOLIA Maiden and Betche. Proteaceae. **Everbearing macadamia.**

From Upper Dungay, via Murwillumbah, New South Wales, Australia. Seeds presented by S. M. Greer. Received January 30, 1928.

A beautiful and vigorous tree with smooth, dark-green leaves somewhat similar to those of a mango. According to Mr. Greer, the nuts are of medium size and resemble *Macadamia ternifolia* in appearance, but have tougher shells, a different flavor, and contain more oil. The variety is referred to as ever-bearing.

For previous introduction see No. 66061.

75855. FRAGARIA sp. Rosaceae. **Strawberry.**

From St. Michael, Azores. Plants presented through Stuart K. Lupton, American consul. Received February 2, 1928.

A variety grown locally.

75856. LILIUM TIGRINUM Ker. Liliaceae. **Tiger lily.**

From Seoul, Chosen. Bulbs obtained through C. H. Stephan, American vice consul in charge. Received January 30, 1928.

Oni yuri. Collected by the Dendrological Experimental Station.

For previous introduction see No. 74221.

75857. SHANTZIA sp. Malvaceae.

From east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received January 31, 1928.

No. 486. Near Camp Kifaru, Tanganyika, September 18, 1927. A small tree common in the thorny tree and grass areas between Mbulu and Ngorongoro Crater.

75858. CANNA EDULIS Ker. Cannaceae. **Edible canna.**

From Pointe a Pitre, Guadeloupe, French West Indies. Tubers presented by A. Kopp, acting director, Station Agronomique de la Guadeloupe. Received June 4, 1927. Numbered February, 1928.

A close relative of the ornamental cannas, cultivated for its edible tubers.

For previous introduction see No. 66339.

75859. COLOCASIA ESCULENTA Schott. Araceae. **Dasheen.**

From Dominica, British West Indies. Tubers presented by F. G. Harcourt, curator and agricultural superintendent of the botanic gardens. Received June 28, 1927. Numbered February, 1928.

Sulphur dasheen. A variety with handsome red leafstalks. The tubers are sometimes used as food, but are inferior to those of the common dasheen. The name probably refers to the color of the interior of the tubers.

For previous introduction see No. 59289.

75860. COLOCASIA ESCULENTA Schott. Araceae. **Taro.**

From Southern Rhodesia, South Africa. Tubers presented by Dr. W. L. Thompson, of the American Board mission at Mount Silinda. Received July 30, 1927. Numbered February, 1928.

Amadumbe. The plants of this Rhodesian taro are much like those of the Trinidad variety except that the petioles of the former are shaded the entire length with maroon.

75861. LILIUM sp. Liliaceae. **Lily.**

From Hong Kong, China. Bulbs obtained from Andrew Tse, through David Griffiths, Bureau of Plant Industry. Received February 6, 1928.

A wild Chinese lily.

75862. DIPELTA FLORIBUNDA Maxim. Caprifoliaceae.

From Jamaica Plain, Mass. Cuttings presented by E. H. Wilson, Arnold Arboretum, Harvard University. Received February 7, 1928.

An ornamental deciduous Chinese shrub up to 15 feet high, somewhat resembling Kolkwitzia, with ovate entire opposite leaves about 4 inches long. The racemes contain from one to six handsome, fragrant, rose-colored abelialike flowers with yellow stripes in the throat, each flower having two large shield-shaped bracts.

75863. CASTANOPSIS sp. Fagaceae. **Evergreen chinquapin.**

From Hanoi, Indo-China. Seeds obtained from P. Ducamp, Inspecteur Adjoint des Eaux et Forêts. Received February 7, 1928.

An evergreen chinquapin, native to Indo-China, with oblong-ovate coriaceous leaves 4 to 6 inches long, smooth and shining above and covered with tawny pubescence beneath. The chestnut-brown ovate-cylindrical nuts, one-fourth to three-fourths of an inch long and one-fourth of an inch in diameter, are borne in small burs covered with long straight spines.

75864. CASTANOPSIS CUSPIDATA (Thunb.) Schottky. Fagaceae. **Japanese chinquapin.**

From Kochi, Shikoku, Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received February 7, 1928.

No. 417. January 17, 1928. In Japan this tree is common from Tokyo southward and is commonly cultivated. It grows from 30 to 75 feet high, with massive widespreading branches. The leaves are variable in size and shape and vary in color on the underside from brownish to nearly white. The acorns are small but sweet and are baked, boiled, or roasted and regularly sold on the Japanese markets. This tree is hardy only in the southernmost United States.

For previous introduction see No. 34642.

75865 to 75959.

From east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received January, 1928.

75865. AIRA sp. Poaceae. **Grass.**

No. 323. August 31, 1927. A fairly soft bunch grass which seeds sparingly. It is found occasionally in the grasslands on Kilimanjaro Mountain, Tanganyika.

75866. BRACHIARIA sp. Poaceae. **Grass.**

No. 410. August 24, 1927. A variety infrequent in depressions along the Kibosho Road, Moshi, Tanganyika.

75867. BRACHYPODIUM sp. Poaceae. **Grass.**

No. 326. August 31, 1927. Seeds of two grasses accidently mixed in gathering from the grassland just above the forest on Kilimanjaro Mountain, Tanganyika. These two, with No. 325 [No. 75870], are the only grasses of soft texture in the high grasslands on Kilimanjaro Mountain. The other grasses are as harsh and stiff as Carex, and there is no evidence that animals eat them. The soft grasses usually show signs of having been grazed. The seed heads are very seldom seen during this season.

75865 to 75959—Continued.

75868. BROMUS sp. Poaceae. **Grass.**

No. 353. October 13, 1927. Next to No. 351 [No. 75869], this is the most important forage grass at high altitudes on Mount Kenya, Kenya Colony. It is much less abundant than No. 351 except possibly at Soames Camp, at an altitude of 12,000 feet.

75869. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

No. 351. October 17, 1927. A local variety growing between Nairobi and Fort Hall, Kenya Colony.

75870. CALAMAGROSTIS sp. Poaceae. **Grass.**

No. 325. August 28, 1927. Seeds somewhat mixed with those of No. 326 [No. 75867]. These are the only grasses of soft texture in the high grasslands on Kilimanjaro Mountain, Tanganyika.

75871. CENTAUREA sp. Asteraceae.

No. 517. Near Camp Kifuru, Tanganyika. September 27, 1927. Perennial composite on burned grassland, which forms masses of heads near the ground. Most flowers pink, rarely pure white or deep red.

75872. CHLORIS sp. Poaceae. **Grass.**

No. 311. September 22, 1927. An unknown grass, which, with Bermuda grass, makes up the bulk of the herbaceous vegetation in the Ngorongoro Crater, Tanganyika. It is apparently much relished by game animals.

75873. CHLORIS sp. Poaceae. **Grass.**

No. 352. *Iringa, isana.* The grass which, with giant Bermuda grass, is considered to be the best potential forage grass in east Africa by Raymond Hook, of Nanyuki, who has a trial garden of grasses. These seeds were obtained by him in Nyasaland.

75874. COIX LACRYMA-JOBI L. Poaceae. **Jobs-tears.**

No. 626. October 7, 1927. An unusually large variety growing along a small creek with sugarcane, maize, and bananas, between Fort Hall and Nyeri, Kenya Colony.

75875. CROSSANDRA NILOTICA Oliver. Acanthaceae.

No. 362. From the garden of Lady Muriel Jex-Blake, Nairobi, Kenya Colony, October 25, 1927. A herbaceous plant 2 feet high from a woody base, originally from the Solai Valley. The bright-green, ovate-lanceolate leaves 4 inches long are in whorls, and the dense spikes of pink or red flowers are on peduncles longer than the leaves. Native to east Africa.

75876 to 75882. CROTALARIA spp. Fabaceae.

75876. CROTALARIA sp.

No. 300. Seeds collected near the river in the region of Camp Kifuru, Tanganyika, between Mbulu and Ngorongoro Tanganyika, September 18, 1927. This species is possibly the same as No. 307 [No. 75878].

75877. CROTALARIA sp.

No. 306. September 20, 1927. A species found on the southern slope of Ngorongoro, Tanganyika, in dense brush and weeds. The leaves and blossoms were gone, but there were many pods which had been entered by insects. This may be the same species as No. 317 [No. 75880].

75878. CROTALARIA sp.

No. 307. August 20, 1927. A large-podded species found infrequently throughout northern Tanganyika. The pods are always badly infested with insects which destroy the seeds, and for this reason they are not as desirable as the smaller podded sorts. This species was growing on the southern outside slope of Ngorongoro, Tanganyika. It is possibly the same as No. 300 [No. 75875].

75879. CROTALARIA sp.

No. 308. September 22, 1927. A species of rather fragile appearance found near the old Siedentopf farm in the Ngorongoro Crater, Tanganyika.

75880. CROTALARIA sp.

No. 317. September 25, 1927. A species found rarely among tall weeds and brush near Camp Nyoka, Ngorongoro, Tanganyika. It may be the same as No. 306 [No. 75877].

75881. CROTALARIA sp.

No. 318. September 20, 1927. An unusual species found in brush land near Camp Nyoka, Ngorongoro, Tanganyika.

75882. CROTALARIA sp.

No. 412. August 4, 1927. Kibosho Road, near Moshi, Tanganyika. This species is scarce and not a strong grower.

75883. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

No. 360. October 27, 1927. A variety, said to have come originally from South Africa, presented by H. E. A. Durham, postmaster of Nairobi, Kenya Colony. It is superior to any of the dozens of varieties, including American ones, which Mr. Durham has tried.

75884. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

No. 312. September 22, 1927. The type of Bermuda grass found in the Ngorongoro Crater, Tanganyika. Here it must endure severe droughts, excessive grazing, and periodical or semiannual burning. It produces seeds freely. Many forms of *Cynodon dactylon* occur in east Africa, this being one of the most common.

For previous introduction see No. 62037.

75885. DOLICHOS LABLAB L. Fabaceae. **Hyacinth bean.**

No. 313. Old Siedentopf farm, Ngorongoro, Tanganyika. September 22, 1927. A common rather weedy species, with purple flowers, widely distributed throughout Kenya Colony and Tanganyika. It is cultivated to some extent by the natives.

75886. ELICHRYSUM sp. Asteraceae. **Everlasting.**

No. 592. Mount Kenya, Kenya Colony. October 13, 1927. A large white everlasting that is frequent in open places in forests and in moors.

75887. ERAGROSTIS sp. Poaceae. **Grass.**

No. 330. September 25, 1927. The predominating species on the black waxy sun-cracked soil between Camp Mukungani and Ngorongoro, Tanganyika. This grass has been seen occasionally elsewhere in east Africa, but never in such abundance.

75888. ERAGROSTIS sp. Poaceae. **Grass.**

No. 411. August 24, 1927. A common grass found in clearings on bush land near Moshi, Tanganyika.

75889 to 75891. FESTUCA spp. Poaceae. **Grass.**

75889. FESTUCA sp.

No. 310. Camp Nyoka, Ngorongoro, Tanganyika. September 19, 1927. An unknown grass, one of the chief species aside from *Themeda triandra*, in the thorn-bush and grass plains between Mbulu and Ngorongoro.

75865 to 75959—Continued.

75890. FESTUCA sp.

No. 322. August 31, 1927. *Kibo* grass. These seeds were gathered from the small bunches of grass growing in the gravel on the saddle toward Kibo for about a mile, then found as widely scattered plants in moist sheltered places as far as Hans Meyer's cave or a little beyond. This species and a Gynaphaliumlike plant are the ultimate vegetation on the Kibo Peak. The extreme altitude is about 17,000 feet.

75891. FESTUCA sp.

No. 351. Camp Mitchell and vicinity. October, 1927. The most abundant grass of forage quality at high altitudes on Mount Kenya, Kenya Colony. It occurs in forest glades and among bamboos at an altitude of 6,000 feet to the limit of the forest and for perhaps another 2,000 feet up on to the high moors. The highest altitude is about 12,000 feet.

75892. GOMPHOCARPUS sp. Asclepiadaceae.

No. 500. September 22, 1927. A milkweed of possible ornamental value infrequent near marshy lands in Ngorongoro Crater, Tanganyika.

75893. GREVILLEA BANKSII R. Br. Proteaceae.

No. 361. October 25, 1927. An ornamental Australian red-flowered shrub or small tree, 8 to 10 feet high, growing in the garden of Lady Muriel Jex-Blake, Nairobi, Kenya Colony.

For previous introduction see No. 74680.

75894 and 75895. HIBISCUS spp. Malvaceae.

October 25, 1927. From the garden of Lady Muriel Jex-Blake, Nairobi, Kenya Colony.

75894. HIBISCUS sp.

No. 364. An ornamental shrub, 6 to 8 feet high, with yellow flowers.

75895. HIBISCUS sp.

No. 365. An ornamental shrub with purple flowers.

75896 and 75897. HYPARRHENIA HIRTA (L.) Stapf. (*Andropogon hirtus* L.). Poaceae. **Grass.**

75896. No. 346a. October 12, 1927. One of the less common grasses in the forest meadows on Mount Kenya, Kenya Colony.

75897. No. 346b. October 14, 1927. Seeds collected on a gravelly ridge beside the road leading to Capt. A. E. Miller's farm at Kalabu, Nanyuki, Kenya Colony.

75898 to 75901. HYPARRHENIA spp. Poaceae. **Grass.**

75898. HYPARRHENIA sp.

No. 293. August 22, 1927. *Red* oatgrass. A tall coarse grass, 6 to 10 feet tall, very common along the road leading to the Kibosho mission, near Moshi, Tanganyika. The heads are similar to the red oatgrass from Kitui and Kinangop Plateau, but the plants are larger and coarser than the latter. This is a very handsome species when ripening, because of the red glumes.

75899. HYPARRHENIA sp.

No. 327. Kilimanjaro Mountain, Tanganyika. August 31, 1927. A rare grass obviously not very aggressive here.

75900. HYPARRHENIA sp.

No. 349. October 14, 1927. A thatching grass used by Capt. A. E. Miller, Kalabu, Nanyuki, Kenya Colony. It is a very abundant grass in the plains around the northwest side of Mount Kenya, Kenya Colony.

75865 to 75959—Continued.

75901. HYPARRHENIA sp.

No. 406. August 24, 1927. A frequent species along the old Moshi and Kibosho Roads and clearings north of Moshi, Tanganyika.

75902. HYPHAENE sp. Phoenicaceae. **Palm.**

No. 623. September 13, 1927. A species growing in the palm belt on the low flat land south of Lake Manyara, Tanganyika.

75903. INDIGOFERA sp. Fabaceae.

No. 305. Ngorongoro, Tanganyika. September 20, 1927. A common species in the dense brush which occupies the burned-over areas on the outside of the smooth side of Ngorongoro. It is an excellent seed producer, partly because the pods are not as subject to insect invasion as the larger podded species.

75904. IPOMOEA sp. Convolvulaceae.

No. 624. September 27, 1927. A shrub common in the grass and Acacia area between Ngorongoro and Mbulu, Tanganyika. The tops are killed with each grass fire and new shoots are sent out.

75905. KALANCHOE sp. Crassulaceae.

No. 363. October 25, 1927. An ornamental shrub with panicles of large flowers, growing in the garden of Lady Muriel Jex-Blake, Nairobi, Kenya Colony.

75906. KOELERIA CONVOLUTA Hochst. Poaceae. **Grass.**

No. 354. Camp Soames, Mount Kenya, Kenya Colony. October 13, 1927. A rather rare grass, found at altitudes of 10,000 to 12,000 feet in the upper grasslands next to the moors.

75907. LEPTOCHLOA sp. Poaceae. **Grass.**

No. 405. August 24, 1927. A common leafy grass 6 to 7 feet tall and of excellent seed habit, growing on clearings north of Moshi, near Kilimanjaro Mountain, and along the old Moshi and Kibosho Roads, Tanganyika. It is found up to an altitude of 5,000 feet.

75908 and 75909. LOBELIA spp. Campanulaceae.

75908. LOBELIA sp.

No. 602. A giant species with large broad bracts, scattered throughout the moors above the forests on Mount Kenya, Kenya Colony. October 13, 1927.

75909. LOBELIA sp.

No. 603. A giant species with long linear bracts, scattered throughout the moors above the forests on Mount Kenya, Kenya Colony. October 13, 1927.

75910. LOTUS sp. Fabaceae.

No. 315. Camp 1 (in the green-barked Mimosas), Ngorongoro, Tanganyika. September 21, 1927. The only legume of any possible forage value found on the plains on the floor of Ngorongoro Crater. It occurs in occasional small areas among the Bermuda grass and blossoms rather sparingly.

75911 to 75915. LUPINUS spp. Fabaceae.

Presented by W. L. Watt, Superintendent, Scott Agricultural Laboratories, Nairobi, Kenya Colony. October 6, 1927.

75911. LUPINUS ALBUS L. **White lupine.**

No. 335. An ovate-leaved, white-flowered legume used for fodder.

For previous introduction see No. 52752.

75865 to 75959—Continued.

75912 and 75913. LUPINUS ANGUSTIFOLIUS L. **Lupine.**

A pinnate-leaved, blue-flowered lupine of European origin.

75912. No. 336. 75913. No. 338.

75914. LUPINUS HIRSUTUS L. **European blue lupine.**

No. 337. An ovate-leaved, blue-flowered lupine of European origin, used for forage and green manure.

75915. LUPINUS LUTEUS L. **European yellow lupine.**

No. 339. A yellow-flowered lupine, 2 feet high, used for fodder.

For previous introduction see No. 52753.

75916 to 75919. MORAEA spp. Iridaceae.

Ornamental bulbous irislike plants.

75916. MORAEA sp.

No. 299. A species growing near Moshi, Tanganyika, August 22, 1927.

75917. MORAEA sp.

No. 329. September 26, 1927. A small, light-blue plant growing in the burned grassland in a little valley to the left of Camp Kifuru, Tanganyika. The bulbs are 5 to 8 inches under ground in soil as dry and hard as an adobe brick.

75918. MORAEA sp.

No. 342. A species growing in a small meadow between Camp Kangeta and Camp Mitchell, Mount Kenya, Kenya Colony, October 11, 1927. This species and No. 343 [No. 75919] are the only ones seen at a higher altitude than 6,000 feet.

75919. MORAEA sp.

No. 343. A small purple-flowered plant growing in a small meadow between 8,000 and 9,000 feet altitude, on Mount Kenya, between Camp Kangeta and Camp Mitchell, October 11, 1927.

75920. PENNISETUM CLANDESTINUM Hochst. Poaceae. **Kikuyu grass.**

No. 332. Nairobi, Kenya Colony. September 30, 1927. A rapid-growing perennial stoloniferous grass, native to South Africa, where it is considered a valuable drought-resistant summer pasture grass.

For previous introduction see No. 74240.

75921. PENNISETUM sp. Poaceae. **Grass.**

Mixed seeds.

No. 95. Collected near Nairobi, Kenya Colony, July 10, 1927.

No. 475. Collected near Arusha, toward Mbugwe, Tanganyika, September 12, 1927.

75922. PENTASCHISTIS sp. Poaceae. **Grass.**

No. 324. August 31, 1927. Next to No. 322 [No. 75890], this is the most abundant grass growing at a high altitude on Kilimanjaro Mountain, Tanganyika, and the only other one of any consequence. These seeds were gathered on the gravel plain of the saddle between Mwanza and Kibo, at an altitude of about 15,000 feet.

75923. PHALARIS sp. Poaceae. **Grass.**

No. 355. October 14, 1927. *Toowomba canary* grass. From the grass garden of Raymond Hook, Nanyuki, Kenya Colony. Mr. Hook collected the original seeds in southern Tanganyika.

75865 to 75959—Continued.

75924. PHASEOLUS LUNATUS L. Fabaceae. **Lima bean.**

No. 334. October 22, 1927. Presented by W. L. Watt, Superintendent, Scott Agricultural Laboratories, Nairobi, Kenya Colony. A very strong-growing bean which makes excellent snap or shelled beans and would probably be a good soil-improving legume.

75925. PROTEA sp. Proteaceae.

No. 437. August 28, 1927. A frequent species in grassland near the heath above the forests on Kilimanjaro Mountain, Tanganyika. The flowers resemble those of a magnolia.

75926. RICINUS COMMUNIS L. Euphorbiaceae. **Castor-bean.**

No. 344. October 11, 1927. A variety grown by Raymond Hook, Nanyuki, Kenya Colony, from seed selected by him in northern Nyasaland. It is the best castor-bean that he has been able to obtain, and yields 40 per cent oil.

75927. SENECIO sp. Asteraceae.

No. 435. Peter's hut, Kilimanjaro Mountain, Tanganyika, August 28, 1927. A giant species with the trunk 7 feet or more high. Leaves about 1 to 1½ feet long. It is found scattered along creeks and slopes.

75928. SENECIO sp. Asteraceae.

No. 605. October 13, 1927. An ornamental composite shrub, with purple flowers, growing in the moors above the forests on Mount Kenya, Kenya Colony.

75929. SETARIA sp. Poaceae. **Grass.**

No. 321. Near Bismarck's hut, Kilimanjaro Mountain, Tanganyika, August 21, 1927. A grass resembling No. 208 [No. 75304], but more compact and leafy.

75930. TELFAIRIA PEDATA (J. E. Smith) Hook. Cucurbitaceae.

No. 358. Embu, Kenya Colony, October 26, 1927. A shrubby vine with pale-purple flowers and oblong fruits, 2 to 3 feet long, containing an abundance of seeds which yield an oil said to be equal in quality to olive oil. The seeds are also boiled and eaten by the natives.

For previous introduction see No. 61504.

75931. TRICHOPTERYX sp. Poaceae. **Grass.**

No. 309. September 15, 1927. An unknown species of good forage appearance found infrequently along the road between Geheri and Mbulu, Tanganyika.

75932. TRICHOPTERYX sp. Poaceae. **Grass.**

No. 345. October 12, 1927. A rather common grass in the meadows in the forest on the northern and western slopes of Mount Kenya, Kenya Colony.

75933 to 75949. TRIFOLIUM spp. Fabaceae. **Clover.**

75933. TRIFOLIUM sp.

No. 228. Uplands, Kenya Colony, September 26, 1927. *Uplands creeping* red clover. A fairly common species in the Kenya highlands between altitudes of 7,000 and 9,500 feet. It occurs higher in the mountains than *Trifolium johnstonii*, but is not so abundant. The foliage is rather stiff and hard, and claimed by some to be neither palatable nor nutritious. Several forms and colors of blossoms were seen but are believed to be variations of the same species. The flowers are wine-colored or lighter, turning blue in herbarium specimens. It is not a profuse bloomer and is usually a shy seeder.

For previous introduction see No. 75386.

75865 to 75959—Continued.

75934. TRIFOLIUM sp.

No. 290. August 22, 1927. A small purple-flowered clover common along the road up to the Kibosho mission, from Moshi, on Kilimanjaro Mountain, Tanganyika. These seeds were collected in the mission grounds along the side of a ravine. They are similar to No. 291 [No. 75935], except that the flowers are purplish magenta instead of deep purple. No. 291 is usually the smaller plant of the two.

75935. TRIFOLIUM sp.

No. 291. Collected along a ravine at the Kibosho mission, above Moshi, on Kilimanjaro Mountain, Tanganyika, at an altitude of 4,500 feet, August 22, 1927. A species similar to No. 290 [No. 75934], except it is somewhat smaller and the flowers are a deep purple instead of light purplish magenta. It is not as common as No. 290 and ripens a little earlier.

75936. TRIFOLIUM sp.

No. 294. Madschame mission, Moshi, Tanganyika, August 22, 1927. A very scarce clover in the closely grazed Kikuyu grass "downs," just above the mission, at an altitude of about 5,000 feet. It is not nearly as abundant as Nos. 290 and 291 [Nos. 75934 and 75935]. It may be a form of *Trifolium johnstonii*, but the florets are mostly clear white.

75937 and 75938. TRIFOLIUM spp.

A small red-flowered clover very abundant on Kilimanjaro Mountain and Mount Meru, Tanganyika. It occurs abundantly in the Kikuyu grass "downs," just below the forest, at altitudes between 3,000 and 6,000 feet. It stands very close grazing, but where not grazed it grows a foot or more high.

75937. TRIFOLIUM sp.

No. 295a. Collected near the first waterfall above Marangu on the way to Nanga, Moshi, Tanganyika, August 26, 1927.

75938. TRIFOLIUM sp.

No. 295b. Collected along the bank of a stream on Mount Meru, Arusha, Tanganyika, September 30, 1927.

75939. TRIFOLIUM sp.

No. 296. August 23, 1927. A dwarf white-flowered clover growing at the Madschame mission, Moshi, Tanganyika. It may be the same as No. 294 [No. 75936], but is much smaller and apparently noncreeping. It is similar in appearance to No. 295 [Nos. 75937, 75938, 75968], but has white flowers. It is not common.

75940. TRIFOLIUM sp.

No. 297. Madschame mission, Moshi, Tanganyika, August 23, 1927. A very scarce violet-flowered clover which may be the same as No. 290 [No. 75934], but is quite distinct from Nos. 291 and 295 [Nos. 75935, 75937, 75938, and 75968]. It ripens several weeks later than No. 295. On ungrazed land it becomes a foot or more tall and somewhat resembles *Trifolium hybridum* in habit.

75941. TRIFOLIUM sp.

No. 301. September 19, 1927. A red-flowered clover resembling No. 290 [No. 75934], growing at the edge of the water of a little stream which comes down from the rim of Ngorongoro, at Camp Nyoka, Tanganyika. The branches were actually trailing in and under the water with roots from the nodes striking down through the water. The main taproot, however, was always in the drier soil at the edge of the stream.

75865 to 75959—Continued.

75942. TRIFOLIUM sp.

No. 302a. September 22, 1927. A large pink-flowered clover, similar in appearance and habit to alsike clover, growing among grass and as a weed in an adjacent cornfield on the old Siedentopf farm, inside the Ngorongoro Crater, Tanganyika. This is the only clover found in any luxuriance in Ngorongoro, and it is probably the one referred to by Mr. Barnes in his book, Through the Great Crater Land to the Congo. At this season (late September) there is not a trace of this or any other clover on the vast plains that form the floor of the great crater. It seems doubtful if any clover exists on the actual floor, since the surface is covered with typical oatgrass and Bermuda grass flora which is obviously subject to severe drought and which, elsewhere, never contains clover. No. 302a apparently has many forms, some of them closely resembling *Trifolium johnstonii*.

75943. TRIFOLIUM sp.

No. 302b. September 25, 1927. This species is probably the same as No. 302a [No. 75942], but it was growing in the wet meadow, about half a mile from Camp Nyoka, on the outside of Ngorongoro, Tanganyika.

75944. TRIFOLIUM sp.

No. 314. September 25, 1927. A single plant, probably of No. 302a [No. 75942], growing in the wet meadow about half a mile from Camp Nyoka, on the outside of Ngorongoro, Tanganyika. It is conspicuous because of the distinct pink spots in the centers of the leaflets and the distinct red margins of the young leaflets.

75945. TRIFOLIUM sp.

No. 316. September 25, 1927. A single plant, probably of No. 302a [No. 75942], growing in the wet meadow about half a mile from Camp Nyoka, on the outside of Ngorongoro, Tanganyika. It is conspicuous because of the distinct white midribs. This species closely resembles *Trifolium johnstonii*.

75946. TRIFOLIUM sp.

No. 319. August 31, 1927. A relatively large creeping pink-flowered clover growing in the path between Bismarck's and Peter's huts, Kilimanjaro Mountain, Tanganyika, at altitudes between 10,000 and 11,000 feet. It forms a dense mat in open places between the bunch grass, but produces very few blossoms at this season. It is undoubtedly a good grazing clover, but its apparent poor seeding habit is a disadvantage.

75947. TRIFOLIUM sp.

No. 347. A fine clover, abundant on Mount Kenya, Kenya Colony, between 6,000 and 13,000 feet altitude. It grows only in locations with plenty of soil moisture. In places the paths and meadows are a solid mass of this clover, which ranges in height between 2 and 16 inches, depending upon conditions. It blooms profusely, seeds freely, and ripens in late November or December. It stands trampling and close grazing, but also grows large enough for hay. This species is one of the best in east Africa.

75948. TRIFOLIUM sp.

No. 348. October 14, 1927. A white clover, which may be a form of *Trifolium johnstonii*, found occasionally in paths and meadows on Mount Kenya, Kenya Colony, at altitudes between 5,000 and 8,000 feet. It is very abundant in the prairies at the foot of the mountain on the way to Capt. A. W. Miller's farm at Kalabu, Nanyuki, Kenya Colony, from Soames Camp. It is not nearly as abundant on Mount Kenya as No. 347 [No. 75947], and ceases altogether at altitudes of 8,000 or 9,000 feet.

75865 to 75959—Continued.

75949. TRIFOLIUM sp.

No. 350. October 11, 1927. A lavender-flowered clover found in the path between Camp Kanget and Camp Mitchell, Mount Kenya, Kenya Colony. It may be merely a mixture of Nos. 347 and 348 [Nos. 75947 and 75948], but there seems to be a lavender-flowered clover at this point not entirely like either of these.

75950. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 367. *Kenya Governor.* This variety is now being planted on large acreages in the highlands of Kenya. Wheat production was at a standstill because of rust until this variety was brought out by the Scott Agricultural Laboratories, Nairobi, Kenya Colony. While not entirely rustproof this variety is more resistant than any wheat obtained from America, Argentina, or Australia.

75951. VICIA sp. Fabaceae. **Vetch.**

No. 298. August 23, 1927. A single plant found along one of the native irrigation ditches on the Fau Plateau, above the Madschame mission, Kilimanjaro Mountain, Tanganyika. This species was not seen in any other section of east Africa.

75952. (Undetermined.)

No. 340. October 1, 1927. Presented by A. E. Harrar, agricultural officer, Moshi, Tanganyika. A fine-appearing pink-flowered leafy plant 2 feet 6 inches high, of possible value as green manure.

75953. (Undetermined.)

No. 366. October 12, 1927. An unknown flowering shrub growing near Camp Mitchell, Mount Kenya, Kenya Colony.

75954. (Undetermined.)

No. 422. August 27, 1927. An undetermined species growing in grassland near Bismarck's hut, Kilimanjaro Mountain, Tanganyika.

75955. (Undetermined.)

No. 471. August 31, 1927. A tall ranunculaceous plant growing at the edge of the forest above Bismarck's hut, Kilimanjaro Mountain, Tanganyika.

75956. (Undetermined.)

No. 522. October 7, 1927. A shrub 2 to 3 feet high found along the road near Fort Hall, Kenya Colony. The bark is used by the natives for tying, etc.

75957. (Undetermined.)

No. 611. October 14, 1927. A shrub growing in open grassy areas in cedar and olive forests on Mount Kenya, Kenya Colony. The berries are used as vermifuge by the natives.

75958. (Undetermined.)

No. 625. September, 1927. A shrub or small tree growing in grassland between Ngorongoro and Mbulu, Tanganyika.

75959. (Undetermined.)

No. 628. October 25, 1927. A tuliplike leaf growth on shallow soil in grassland near Thika River, Ol Donyo Sabuk.

75960. BRACHIARIA DISTACHYA (L.) A. Camus. Poaceae. Grass.

From Suva, Fiji Islands. Seeds presented by J. D. Tothill, of the Department of Agriculture. Received February 11, 1928.

A leafy variety, 2½ feet high, which makes an excellent pasture and hay grass.

For previous introduction see No. 41746.

75961 to 75966.

From Darjiling, India. Seeds presented by J. E. Leslie, Curator of the Lloyd Botanic Garden. Received February 6, 1928.

75961. INDIGOFERA DOSUA Buch.-Ham. Fabaceae. **Indigo.**

A low shrub with woody branches, clothed with a gray or brownish short pubescence. The leaves, 1 to 3 inches long, bear leaflets one-fourth to one-half inch long which are dull green above and glaucous below. The racemes of bright-red flowers are 1 to 3 inches long with lanceolate-cuspidate silky bracts.

For previous introduction see No. 50368.

75962. KADSURA ROXBURGHIANA Arnott. Magnoliaceae.

A subtropical woody climber native to India. The ovate-acuminate leathery leaves are 6 inches long; the axillary white flowers are half an inch across, and the heads of ripe berries are 2 inches in diameter.

75963. LUCULIA GRATISSIMA (Wall.) Sweet. Rubiaceae.

A tree or spreading shrub, native to the temperate Himalayas, where it attains a height of 10 to 16 feet. It is a very attractive ornamental because of the gorgeous rounded masses of pink or rose-colored flowers. It is said to make an excellent table plant when grown in a pot and treated somewhat similarly to a gardenia.

For previous introduction see No. 68339.

75964. PITTOSPORUM FLORIBUNDUM Wight and Arnott. Pittosporaceae.

A handsome subtropical tree with a short straight trunk, spreading branches, and numerous yellowish flowers in terminal panicles. The tree has light-colored, strong, tough wood and yields an aromatic yellow resin or oleoresin having very adhesive properties. This tree is native to the outer Himalayas, ascending to 3,500 feet.

For previous introduction see No. 73153.

75965. POTERIUM DIANDRUM Hook. f. Rosaceae.

A herbaceous perennial with erect branching stems 2 to 3 feet high, native to India. The leaves are pinnately compound, and the small heads of dark-purple flowers are on erect slender axillary stems.

75966. RHODODENDRON CAMPANULATUM Don. Ericaceae.

A large evergreen shrub of stiff, spreading habit, sometimes 12 feet high, with oval leaves which are densely covered beneath with a red-brown felt. The flowers, of various rosy purple shades and about 2 inches across, are produced during April in rather loose clusters about 4 inches in diameter.

75967. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Corinto, Nicaragua. Seeds presented by Christian T. Steger, American consul. Received February 13, 1928.

A variety grown locally which is said to be immune from attack by the boll weevil.

75968. TRIFOLIUM sp. Fabaceae. **Clover.**

From east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received in January, 1928.

No. 295. August 23, 1927. A small red-flowered clover very abundant in the kikuyu grass "downs," on Kilimanjaro Mountain, just above the Madschame mission, Tanganyika, at an altitude of 5,000 feet. The "downs" are generally very closely grazed, but where not grazed this species grows a foot or more tall.

75969. SEVERINIA BUXIFOLIA (Poir.) Ten. (*Atalantia buxifolia* Oliver). Rutaceae.

A variety of unknown origin obtained through W. T. Swingle, Bureau of Plant Industry. Received February 16, 1928.

A subtropical thorny shrub resistant to alkali and salt. It has shiny green leaves, clusters of small white flowers, and dark-red berrylike fruits.

For previous introduction see No. 74188.

75970. CROTALARIA INCANA L. Fabaceae.

From Trujillo, Honduras. Seeds collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour 1928 expedition. Received February 16, 1928.

No. 1–a. January 23, 1928. A yellow and bronze-colored flowering plant 18 to 24 inches high. The plants from which these seeds were collected were growing in almost pure beach sand on the coast of the Bay of Trujillo.

75971 and 75972. SOLANUM MACROCARPON L. Solanaceae.

From Luchenza, Nyasaland Protectorate, Africa. Seeds presented by L. S. Norman. Received February 17, 1928.

75971. A stout undershrub with a much-branched smooth stem and ovate sinuate-margined leaves 8 inches long. The racemose cymes, opposite the leaves, bear blue-purple flowers, 1 to 2 inches broad, which are followed by globose yellow fruits the size of an apple.

For previous introduction see No. 46330.

75972. A variety grown locally.

75973 to 75979.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Buitenzorg Botanic Gardens. Received February 17, 1928.

75973 to 75975. ALBIZZIA spp. Mimosaceae.

75973. ALBIZZIA FALCATA (L.) Backer (*A. moluccana* Miquel).

A rapid-growing tropical tree with large feathery leaves and small globular flower heads. It is used for shade in coffee plantations.

For previous introduction see No. 68838.

75973 to 75979—Continued.

75974. ALBIZZIA LUCIDA (Roxb.) Benth.

A handsome spreading leguminous tree with attractive feathery leaves, native to the East Indies.

For previous introduction see No. 73223.

75975. ALBIZZIA SAPONARIA (Lour.) Blume.

A small tree, native to the East Indies, with gray bark and alternate double compound leaves. The bark contains saponin and is used by the natives of the Philippines as soap for washing their hair.

For previous introduction see No. 68840.

75976 to 75978. CASSIA spp. Caesalpiniaceae.

75976. CASSIA ABSUS L.

An erect annual tropical legume, about 2 feet high, with small reddish yellow flowers. It is a native to India and Egypt.

For previous introduction see No. 67899.

75977. CASSIA MARGINATA Roxb.

A small tropical tree with rose-colored flowers and drooping branches. It is native to the East Indies.

For previous introduction see No. 68846.

75978. CASSIA QUINQUANGULATA L. Rich.

A yellow-flowered tropical evergreen shrub 3 feet high.

For previous introduction see No. 72432.

75979. CROTALARIA ALBIDA Heyne. Fabaceae.

A tropical Indian shrub, 1 to 2 feet high, with numerous slender silky pubescent branches, firm narrow leaves, short racemes of pale-yellow flowers, and oblong pods about half an inch long.

For previous introduction see No. 65698.

75980. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received February 17, 1928.

King Humbert. A medium-early, tall, vigorous variety with long clusters of 8 or 10 very fleshy, bright-scarlet fruits which resemble a hen's egg in size and shape.

75981. HICORIA CATHAYENSIS (Sargent) Chun. Juglandaceae. **Hickory.**

From Nanking, China. Seeds purchased from Prof. J. H. Reisner, of the University of Nanking. Received February 21, 1928.

A Chinese tree up to 75 feet high, with a gray-barked trunk 1 to 2 feet in diameter and compound leaves about a foot long, composed of five to seven pairs of narrowly oval leaflets which are pale green above and rusty brown beneath. The thick-shelled nuts, about an inch long, are eaten as a sweetmeat, and a clear yellow oil is extracted from them for use in fancy pastry. The strong tough wood is used for tool handles.

For previous introduction see No. 65708.

75982 to 75990.

From Ottawa, Canada. Seeds presented by J. Adams, botanist, Central Experimental Farm. Received February 21, 1928.

75982. COTONEASTER sp. Malaceae.

No. 932. Originally from Turkestan.

75982 to 75990—Continued.

75983. INCARVILLEA SINENSIS Lam. Bignoniaceae.

No. 80. A biennial ornamental with long spikes of rosy red or yellow flowers. Native to China.

75984 to 75990. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

75984. LONICERA ALPIGENA L.

No. 125. An ornamental shrub up to 10 feet high, native to central Europe. The greenish yellow flowers, tinged with dull red, are borne in the axils of the elliptic leaves, on stalks 2 inches long, and are followed by cherrylike scarlet fruits.

For previous introduction see No. 74686.

75985. LONICERA CONFUSA DC.

No. 137. A half-evergreen twining shrub, native to eastern China, with dark-green, ovate leaves and black fruits. The flowers, in dense panicles, are white, changing to yellow, and are delightfully fragrant.

75986. LONICERA NERVOSA Maxim.

No. 139. A hardy graceful Chinese shrub, about 10 feet high, with slender, dark-purple branchlets, oval, purple-veined leaves, small pink flowers, and black berries.

For previous introduction see No. 66811.

75987. LONICERA ORIENTALIS Lam.

No. 143. An ornamental shrub about 10 feet high, native to Asia Minor. The ovate-lanceolate leaves are 2 to 4 inches long, and the small, dull pink to violet flowers are followed by black fruits.

75988. LONICERA PYRENAICA L.

No. 145. A small upright shrub 3 to 4 feet high, native to southern Europe. The leaves are ovate to oblong, bluish green above and whitish below, and the nodding flowers, on slender stalks, are pinkish white and nearly an inch long. The subglobose berries are red.

75989. LONICERA TATARICA PARVIFOLIA Jaeger.

No. 144. A form of the Tatarian honeysuckle native to Turkestan, which has ovate-elliptic bluish green leaves 2 inches long, small white flowers, and orange-red fruits.

75990. LONICERA XYLOSTEOIDES Tausch (*L. micrantha* Zabel).

No. 135. An ornamental shrub, considered to be a hybrid between *Lonicera tatarica* and *L. xylosteum*, with rhombic-ovate, bluish green leaves and small pinkish flowers.

75991 to 75994.

From Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received February 24, 1928.

75991. INDIGOFERA sp. Fabaceae. **Indigo.**

No. 397. From the Kalalu farm, north of Nanyuki, Kenya Colony, October, 1927. Apparently a native species on the plains northwest of Mount Kenya, Kenya Colony. It is one of the few legumes that appears to be indigenous to the thorn-bush plains.

75992. PANICUM TRICHOCLADUM Hack. Poaceae. **Grass.**

No. 395. December 21, 1927. Presented by Dr. I. B. Pole Evans, botanist, Department of Agriculture, Pretoria, Union of South Africa. One of the promising grasses for the high dry veldt in the Transvaal. It is a perennial grass

75991 to 75994—Continued.

with woody stems climbing to 8 feet, native to east Africa. The narrowly lanceolate softly pubescent leaves are 6 inches long, and the flowers are in ovate panicles 2 to 6 inches long.

75993. QUAMOCLIT LOBATA (Cerv.) House (*Ipomoea versicolor* Meissn.). Convolvulaceae. **Crimson starglory.**

No. 394. Presented by W. L. Watt, Superintendent, Scott Agricultural Laboratories, Nairobi, Kenya Colony, November 20, 1927. A vine with brilliant red and yellow flowers, believed to be from tropical America, growing as a volunteer among blue-flowered lupines in a flower border on the grounds of the Scott laboratories. It is a vigorous perennial climber 15 to 20 feet high, the 3-lobed leaves have a cordate base, and the bag-shaped corolla opens crimson and fades to pale yellow.

75994. TRIFOLIUM BURCHELLIANUM Seringe. Fabaceae.

No. 396. December 21, 1927. Growing at the Department of Agriculture, Pretoria, Union of South Africa. Dr. I. B. Pole Evans states that this is the most cold-resistant of the indigenous clovers. It is a perennial South African clover with prostrate rooting stems 1 to 2 feet long. The three broadly obcordate leaflets are on petioles 3 inches long, and the flower heads closely resemble those of white clover, *Trifolium repens*, but the teeth of the calyx lobes are longer than the tube while in white clover they are shorter than the tube.

75995. LAVANDULA SPICA L. Menthaceae. **Lavender.**

From Cannes, France. Seeds presented by F. Chauvet & Co. Received February 24, 1928.

Variety *Delphinensis*. A Mediterranean subshrub up to 3 feet high, with white tomentose young leaves and interrupted spikes of lavender flowers. It is a source of lavender oil which is used in perfumery, medicine, and the manufacture of varnish.

75996 and 75997. LILIUM spp. Liliaceae.

From Tunbridge Wells, England. Bulbs purchased from R. Wallace & Co. Received March 1, 1928.

75996. LILIUM CONCOLOR Salisb. **Morningstar lily.**

Variety *coridon*. A handsome form from Mongolia, with beautiful citron yellow flowers more or less spotted with purplish brown.

75997. LILIUM SPECIOSUM Thunb.

Variety *album novum*. A form distinct from the variety *Kraetzeri*, with pure white flowers which have beautiful golden-yellow anthers.

75998 and 75999.

From Summit, Canal Zone. Bulbs presented by J. E. Higgins, Plant Introduction Garden. Received September 8, 1927. Numbered in March, 1928.

75998. (Undetermined.)

A bulbous plant with large white flowers, growing in the mountains of Ecuador at an altitude of 6,000 feet.

75999. (Undetermined.)

A bulbous plant growing in the mountains of Bolivia at an altitude of 9,000 feet. The pale-yellow flowers are campanulate, deeply segmented, about 2 inches in diameter, and arranged in large spikes a foot long. The bulbs are 3 to 4 inches in diameter. This plant covers large areas on steep hillsides and blooms early in the spring before the leaves appear.

76000 to 76007. PRUNUS spp. Amygdalaceae.

From Saonara, Padova, Italy. Plants purchased from Fratelli Sgaravatti. Received January 4, 1928.

76000. PRUNUS AVIUM L. **Sweet cherry.**

Napoleone (*Imbrian*). A variety which produces large, brilliant rose-colored fruits, with very agreeable, white pulp, ripening during June and July.

76001 to 76007. PRUNUS CERASUS L. **Sour cherry.**

76001. *Del Nord*. A variety producing medium-sized juicy and somewhat acid fruits which are rose red passing to purple. They ripen during June.

76002. *Imperiale*. A variety producing large bright-red fruits which are tender, sweet, and slightly acid. They ripen during June and July.

76003. *Lodgiana*. A variety with medium-sized red subacid fruits which ripen during June and July.

76004. *Marasca di Ostheim*. A variety with medium-sized deep-red fruits which ripen during June.

76005. *Marasca moscata*. A large-fruited variety with especially fine flavor.

76006. *Marasca olandense*. A large black-fruited variety.

76007. *Ministro Podbielski*. A variety producing very large deep-red fruits with subacid flesh and colored juice. They ripen during July.

76008. MELIOSMA DILLENIAEFOLIA Wall. Sabiaceae.

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, forest botanist of the Forest Research Institute and College. Received January 6, 1928.

A small tree up to 20 feet high, native to the temperate slopes of the Himalayas in India. The branchlets, petioles, and panicles are covered with a soft rusty pubescence. The obovate, coarsely toothed leaves are a foot long, and the small white flowers are borne in lax panicles.

76009. PANAX QUINQUEFOLIUM L. Araliaceae. **Ginseng.**

From Tokyo, Japan. Seeds presented by Dr. T. Kariyone, of the Imperial Hygienic Laboratory. Received January 6, 1928.

A Japanese ginseng which is cultivated in Japan for export to China, where it is highly regarded for medicinal purposes.

For previous introduction see No. 36282.

76010. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Fa Hua Ssu Temple, Chihli, China. Seeds obtained through Peter Liu, Peking. Received January 10, 1928.

Tiger-paw chestnut.

For previous introduction see No. 62257.

76011. DIOSPYROS VIRGINIANA L. Diospyraceae. **Common persimmon.**

From Glenn Dale, Md. Seeds presented by Albert Hassall, Bureau of Animal Industry. Received January 10, 1928.

A variety with unusually sweet and aromatic flesh from which the seeds separate very easily.

76012. DANTHONIA PILOSA R. Br. Poaceae. **Grass.**

From Wellington, New Zealand. Seeds presented by Wright, Stephenson & Co. Received January 10, 1928.

A grass native to New Zealand, which is gradually gaining popularity there as a pasture grass and also in several other countries where it has been tried. It is a perennial and is said to thrive in districts too dry to support almost any other grass. It does well on dry clay hills or stony flats and is considered especially good for sheep.

For previous introduction see No. 64527.

76013. CLEMATIS ARMANDI Franch. Ranunculaceae. **Armand clematis.**

From Paris, France. Plants purchased from Vilmorin-Andrieux & Co. Received January 12, 1928.

A tender ornamental Chinese vine with fragrant starry white flowers. It is characterized by the abundance and the persistence of its foliage.

For previous introduction see No. 63392.

76014. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

From Mexico. Cuttings obtained through L. H. Dewey, Bureau of Plant Industry. Received January 10, 1928.

A close relative of the kapok tree (*Ceiba pentandra*), said to form a large or medium-sized tree with a greenish spiny trunk, compound leaves, and hard oblong fruits about 7 inches long which contain whitish down used for stuffing pillows, life preservers, and for making candlewicks. It is native to western and southern Mexico.

For previous introduction see No. 75698.

76015. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From New Smyrna, Fla. Seeds presented by John Y. Detwiler, through R. A. Young, Bureau of Plant Industry. Received January 11, 1928.

A guava with thick flesh which is sweet with a fair amount of acid and comparatively small seeds. The specimen of fruit received, said to be one-third to one-half average size, was 3⅛ by 2¾ inches, yellow skinned and white fleshed, the flesh being nearly three-fourths of an inch thick.

For previous introduction see No. 75724.

76016. ACANTHORHIZA WARSZEWICZII Wendl. Phoenicaceae. **Palm.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received January 12, 1928.

A handsome palm with fan-shaped leaves which with age become divided at the base. The lower part of the slender trunk is armed with spinelike roots. Native to Panama.

76017. CITRUS sp. Rutaceae.

From Wellington, New Zealand. Seeds presented by Mrs. Frieda Cobb Blanchard. Received January 14, 1928.

The *Pitcairn Island* orange is a variety grown locally.

76018. PRUNUS sp. Amygdalaceae. **Cherry.**

From Mienchow, Szechwan, China. Seeds of unknown origin. Received January 10, 1928.

Wild cherry fruits.

76019. QUERCUS SUBER L. Fagaceae. **Cork oak.**

From Santa Barbara, Calif. Plants presented by E. O. Orpet, superintendent of parks. Received January 16, 1928.

Seedlings grown by Mr. Orpet from seed produced in California.

76020. LILIUM GIGANTEUM Wall. Liliaceae. **Giant lily.**

From Hong Kong, China. Seeds obtained from A. Tse, through David Griffiths, Bureau of Plant Industry. Received January 19, 1928.

A variety native to the damp thick forests of the Himalayas at altitudes of 7,500 to 9,000 feet, which are covered with snow from November to April. The bulb grows close to the surface in rich black mold. The hollow stems are often from 6 to 9 feet high and are reported to be used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large fragrant white flowers, as many as 12 to a raceme, the perianth tube is slightly greenish and the inner surfaces of the segments are tinged with deep purple.

For previous introduction see No. 72610.

76021 to 76024.

From Teheran, Persia. Seeds presented by E. S. Haskell, Director General of Agriculture. Received January 15, 1928.

76021 to 76023. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

These varieties were obtained in the market at Teheran.

76021. No. 1. **76023.** No. 3.

76022. No. 2.

76024. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

A variety from the financial agent of Bojnoord, Khorossan Province. The Persian name for this type of melon is *kharbooseh*. It is an elongated oval melon, 4 to 7 inches by 10 to 20 inches, with a light yellow to nearly white surface, and is rather smooth. The flesh is white, 1½ to 2 inches thick, and free from fiber.

76025 to 76027. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received January 18, 1928.

76025. *Lentillon de Mars.* Seeds very small, very thin skinned, with a delicate flavor.

76026. *Large blond.* Seeds very broad, flat, of excellent quality. A variety largely cultivated.

76027. *Verte du Puy.* Seeds small, thick, pale green speckled with dark green.

76028. ANDROPOGON ISCHAEMUM L. Poaceae. **Grass.**

From Brignoles, France. Seeds presented by R. Salgues, Director of the Brignoles Botanic Station. Received January 17, 1928.

A local leafy variety 3 to 4 feet high, producing a large quantity of coarse feed.

For previous introduction see No. 62162.

76029 to 76032.

From La Fosse, Loir et Cher, France. Seeds presented by A. Gérard. Received January, 1928.

76029. CUPRESSUS CASHMERIANA Royle. Pinaceae. **Cypress.**

A tree up to 60 feet high, with a glaucous white trunk and flat pendulous branches. It is considered to be a native of Kashmir.

76030. DAVIDIA INVOLUCRATA Baill. Cornaceae. **Dovetree.**

An ornamental tree up to 75 feet high, closely related to the dogwoods, with large white flower bracts. Native to western China.

For previous introduction see No. 71043.

76031. MAGNOLIA OBOVATA Thunb. Magnoliaceae.

A scarlet-fruited, handsome pyramidal tree, 90 feet high, native to Japan. The obovate leaves, 16 inches long, are abruptly contracted at the base, and the fragrant white flowers, 6 inches in diameter, have bright-crimson anthers and pistils.

76032. SOLANUM AVICULARE Forst. f. Solanaceae.

A beautiful blue-flowered, yellow-fruited shrub with laciniate leaves. Native to New Zealand.

For previous introduction see No. 64984.

76033 to 76044.

From St. Jean le Blanc, Loiret, France. Plants presented by Edmond Versin. Received January 14, 1928.

76033. CORIARIA HIMALAYENSIS Hort. Coriariaceae.

A subtropical shrub said to resemble *Coriaria nepalensis* and to have persistent leaves and edible fruits.

76034. CYNOGLOSSUM FURCATUM Wall. Boraginaceae.

A herbaceous perennial native to India. The plants have several stems from a rosette of lanceolate, soft-haired entire leaves. The small blue flowers are borne in long slender clusters similar to those of the forget-me-not.

76035. CYTISUS SESSILIFOLIUS L. Fabaceae. **Sessile broom.**

A shrub, 2 to 4 feet high, native to southern Europe. The yellow flowers are produced in short racemes.

For previous introduction see No. 73544.

76036. ISATIS GLAUCA Auch. Brassicaceae.

A herbaceous perennial plant 2 to 4 feet high, native to Asia Minor and Persia. The stout glaucous stem bears small leaves and a large panicle of small yellow flowers.

76037. LIGUSTRUM ACUMINATUM Koehne. Oleaceae. **Privet.**

Variety *macrostachyum*. A Japanese upright shrub with spreading branches, sometimes 8 feet tall. The ovate leaves are acuminate, and the small white flowers, borne in large panicles, are followed by lustrous black fruits.

76038. MICROGLOSSA ALBESCENS (DC.) Benth. Asteraceae.

An ornamental subtropical shrub with narrow, sharp-pointed leaves and heads of light-lilac flowers. Native to India.

For previous introduction see No. 72644.

76033 to 76044—Continued.

76039. PAULOWNIA SPECIOSA Hort. Scrophulariaceae.

A Chinese ornamental tree with purple flowers.

For previous introduction see No. 72645.

76040 to 76042. ROSA spp. Rosaceae. **Rose.**

76040. ROSA CANINA LEUCANTHA Boiss.

A form of the dog rose which differs in having glandular petioles and larger leaflets which, on the underside, have glands on the veins. Native to the Caucasus region.

76041. ROSA DIVARICATA Hort.

An ornamental shrub.

76042. ROSA NOISETTIANA Thory. **Noisette rose.**

Variety *faroncana*. A vigorous shrub 10 feet high.

76043. SALIX MAGNIFICA Hemsl. Salicaceae. **Willow.**

A shrub or small tree with purple buds and young shoots, native to China. It is remarkable for the large elliptic leaves resembling those of a poplar and for the long fruiting catkins which sometimes reach a length of 12 inches.

76044. SYRINGA VILLOSA Vahl. Oleaceae. **Late lilac.**

A bushy lilac about 8 feet high, with stout, upright branches, broadly oval, bright-green leaves, and pinkish lilac flowers in panicles of 3 to 7 inches long. Native to China and the Himalayas.

For previous introduction see No. 66947.

76045 and 76046. GOSSYPIUM spp. Malvaceae. Cotton.

From the Galapagos Islands. Seeds obtained through T. H. Kearney, Bureau of Plant Industry. Received January 19, 1928.

Wild cotton collected by J. R. Slevin, of the California Academy of Sciences, San Francisco, Calif.

76045. GOSSYPIUM sp.

A. Seeds of a fuzzy-seeded form.

76046. GOSSYPIUM sp.

B. [Received without notes.]

76047. PIROCYDONIA sp. Malaceae.

From Paris, France. Cuttings obtained by Charles F. Swingle, Bureau of Plant Industry. Received January 21, 1928.

A hybrid between Pyrus and Cydonia obtained at the Luxembourg Gardens in Paris.

76048. CORYPHA UMBRACULIFERA L. Phoenicaceae. Talipot palm.

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator of the Royal Botanic Gardens, Department of Agriculture. Received January 23, 1928.

A large palm up to 80 feet high, native to Ceylon, with leaves 12 feet long and 16 feet broad, made up of lobed segments. The creamy white flowers are in huge terminal panicles 20 feet long, and the palm dies after fruiting.

For previous introduction see No. 52802.

76049 to 76059.

From Orleans, France. Plants presented by Léon Chenault. Received January 25, 1928.

76049. ACER HERSII Rehder. Aceraceae. **Maple.**

A medium-sized maple tree, native to northern China, with cordate, broadly ovate, long-pointed, 3-lobed leaves and winged nutlets about an inch long.

76050. ALNUS HIRSUTA SIBIRICA C. Schneid. Betulaceae. **Alder.**

A handsome Siberian tree, 60 feet high, of broad-pyramidal habit and vigorous growth, with broadly ovate leaves about 5 inches long which are dark green above and glaucous beneath.

76051. BERCHEMIA GIRALDIANA C. Schneid. Rhamnaceae.

A low-climbing woody Chinese shrub with ovate leaves 3 inches long, grayish white beneath, and attractive red fruits.

76052. BETULA SCHMIDTII Regel. Betulaceae. **Birch.**

A Japanese tree, 65 feet high, with a trunk 3½ to 7½ feet in diameter and black bark which falls off in thick, rather small plates. The finely serrate leaves are short stemmed, and the catkins are narrow, stiff, and erect.

For previous introduction see No. 64234.

76053. CARYOPTERIS MONGHOLICA Bunge. Verbenaceae.

An ornamental woody plant producing, during the autumn, lavender-blue flowers in densely clustered axillary cymes. In this species the flowers are less numerous, but larger than those of *Caryopteris incana*.

For previous introduction see No. 42776.

76054. CLADRASTIS SINENSIS Hemsl. Fabaceae.

A Chinese tree up to 80 feet high, with large panicles of white or pinkish flowers.

76055. COTONEASTER SEROTINA Hutchinson. Malaceae.

A small Chinese tree with elliptic papery leaves, small white flowers borne in many-flowered corymblike clusters, and attractive, bright-red berries which persist throughout most of the winter.

For previous introduction see No. 62321.

76056. EVODIA DANIELLII (Benn.) Hemsl. Rutaceae.

A bushy tree, 10 to 20 feet high, with unequally pinnate leaves up to 3 inches long, numerous corymbose panicles of whitish flowers which appear in June and July, and oblong or elongated fruit capsules which have a peculiar aromatic odor and a pungent bitter flavor. Native to northern China.

For previous introduction see No. 49131.

76057. LESPEDEZA CYRTOBOTRYA Miquel. Fabaceae.

A low shrubby Japanese plant with racemes of rosy purple, pea-shaped flowers.

For previous introduction see No. 73439.

76058. STAPHYLEA HOLOCARPA ROSEA Rehd. and Wils. Staphyleaceae. **Bladdernut.**

A Chinese shrub or small tree up to 30 feet high, with trifoliolate leaves, slender panicles of pink flowers, and pear-shaped bladdery fruits about 2 inches long.

76059. ULMUS sp. Ulmaceae. **Elm.**

A tree native to central Asia.

76060. ORYZA BARTHII Cheval. Poaceae. **Rice.**

From Freetown, Sierra Leone, West Africa. Seeds presented by Douglas W. Scotland, Acting Commissioner of Lands and Forests. Received January 26, 1928.

A perennial rice growing on the banks of the Bum Kittam River, Nongoba Bullom Chiefdom, Bonthe District, Sierra Leone. This rice is known to the Sherbro tribe as Teteki (devil rice), to the Sherbro Mendi tribe as Ngafambei (devil rice), to the Mendis as Ngewombei (God's rice), and to the Bulloms and natives of the Scarcies River area as Antecheki (devil rice). The grains are collected and hulled for food by the natives inhabiting the flooded areas on the Bum Kittam River. To harvest the rice the people paddle their canoes in among the rice and shake the ears over the canoe, and, as the grains are easily shed, a canoe full of grains can be obtained in a very short time. The height of the rice depends on the flood level of the water. Stalks sometimes reach a height of 16 feet. The inflorescence and ears always keep above the water level. When the swamps dry out during the dry season the rice invariably is burned by the natives, but this does not destroy the plant as it ratoons freely with the rise of flood waters during the following rains.

76061 and 76062.

From Tananarive, Madagascar. Seeds presented by the chief of the agricultural service. Received January 25, 1928.

76061. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

A variety grown locally.

76062. CROTALARIA sp. Fabaceae.

A tropical American shrubby leguminous plant, up to 6 feet high, used as a cover plant in the East Indies.

For previous introduction see No. 72434.

76063. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Eala, Belgian Congo, Africa. Seeds presented by A. Corbisier-Baland, of the Eala Botanic Garden. Received January 24, 1928.

A local variety.

76064 to 76085. PRUNUS spp. Amygdalaceae.

Japanese flowering cherries growing at the United States Plant Field Station, Glenn Dale, Md. Numbered March, 1928.

76064 to 76079. PRUNUS SERRULATA Lindl. **Japanese flowering cherry.**

76064. Tree 73. *Amanogawa* (milky way). Tree up to 25 feet high; bark dark gray; young foliage bronze green; flowers pale pink, semidouble, fragrant, about 1¾ inches across, in erect clusters of three, blooming about midseason. The upright habit of this form, comparable to that of the Lombardy poplar, makes it of special value for certain garden effects.

For previous introduction see No. 69079.

76065. Tree 79. *Benitoranowo.* The young foliage brownish; flowers pink, slightly double, about 1½ inches across, deeper pink at center and around edges, in clusters of three to five, blooming comparatively late. The Japanese name means "large pink flower clusters."

76064 to 76085—Continued.

76066. Tree 82. *Botanzakura.* Tree of spreading habit; bark brownish; young foliage orange bronze; flowers semidouble, pale pink with darker centers, about 1¾ inches across, in clusters of three to five, blooming about midseason. The Japanese name means "peony-flowered cherry."

76067. Tree 105. *Fugenzo.* Tree large, spreading and up to 25 feet high; probably the most vigorous of the double-flowered forms; young foliage bronze colored; buds deep pink; flowers double, pink, nearly 2 inches across, in 2-flowered to 4-flowered clusters, blooming rather late. A variety cultivated by the Japanese since ancient times; the name refers to a Japanese divinity.

76068. Tree 51. *Gyoiko* (imperial). A vigorous erect tree, 12 to 14 feet high, bearing flowers in great profusion. The semidouble, greenish white flowers, the petals of which are striped darker green with occasional tinges of pink, are about 1½ inches in diameter and are produced in clusters of three to five.

For previous introduction see No. 67959.

76069. Trees 52, 64. *Hitoyezakura* (single-petal cherry). Tree up to 40 feet high; bark pale gray and smooth; young foliage brownish; flowers pink, single, less than 1½ inches wide, blooming midseason. A variety of but little ornamental merit but of possible value as a stock.

76070. Trees 46, 48. *Horinji.* Tree of upright spreading habit; bark dark gray; young foliage bronze green; buds deep pink; flowers semidouble, pink with lighter centers, about 1⅝ inches across, in few-flowered clusters, blooming rather early. Named for an ancient temple in Kyoto, Japan.

76071. Tree 84. *Kunrinjoshirotae* (best pure white). Tree of spreading habit; young foliage coppery green; flowers white or pinkish, single or slightly double, about 2 inches across, in clusters of three or four, blooming about midseason.

76072. Trees 65, 71. *Kwanzan.* Tree upright-spreading in habit, becoming about 25 feet high; bark dark brownish gray; young foliage bronze green; buds rose red; flowers deep pink, double, nearly 2 inches across, in clusters of two to five, blooming late. This is considered by some horticulturists to be the finest of the double-flowering cherries, because of the deep color of the flowers. The name refers to a Japanese mountain.

For previous introduction see No. 69363.

76073. Tree 101. *Miyako* (beauty or prosperity). Tree upright-spreading; young foliage brown; buds pink; flowers light pink, semidouble, about 1¾ inches across, in few-flowered clusters, blooming rather late.

76074. Tree 83. *Ohnanden* (snowslide or avalanche). Tree upright-spreading; young foliage brown; buds deep pink; flowers double, about 2 inches wide, pink with deeper-colored edges, in pendent clusters of twos and threes. An attractive variety, resembling *Kwanzan* [No. 76072], but with lighter-colored flowers and not as free blooming.

76064 to 76085—Continued.

76075. Tree 49. *Ojochin* (big lantern). Tree upright-spreading; bark brownish gray; flowers semidouble, light pink, nearly 2 inches across, in clusters of three to five, blooming midseason. An attractive variety, resembling *Ariake* in general, but the flowers are pinker and the petals more wrinkled.

76076. Trees 60, 87, 94. *Oshimazakura.* A quick-growing and comparatively short-lived tree up to 30 feet high, with pale-gray bark and thick, spreading branches. The numerous single, white or pinkish flowers are fragrant, and the small ovoid fruits are shining black. Native to central and southern Japan. The name refers to Oshima, an island of Japan, where this cherry is native.

76077. Tree 77. *Senriko* (fragrance for 2,000 miles). Tree upright ascending in habit, about 20 feet high; bark brownish gray; young foliage coppery green; flowers single or nearly so, white with a pink blush, fragrant, about 1¾ inches across, usually three or four in a cluster, blooming about midseason.

For previous introduction see No. 69085.

76078. Trees 54, 59, 88, 99. *Shirofugen* (white goddess). A variety closely resembling *Fugenzo* [No. 76067], from which it differs in having lighter-colored flowers.

For previous introduction see No. 69087.

76079. Tree 57. *Shogetsu* (early delight). Tree of medium size with a spreading, rather flat crown; buds deep pink, flowers double, with nearly white centers, tinged with pink on the edges, up to 2¼ inches across, in clusters of two to four. An excellent double-pink variety.

For previous introduction see No. 72893.

76080. PRUNUS YEDOENSIS Mats.
Yoshino cherry.

Tree 76. *Taizanfukun* (mountain snowcap). Tree erect, about 15 feet high, with dark-brown bark; flowers semidouble, pink, about an inch in diameter, often borne near the ends of the branches.

For previous introduction see No. 67962.

76081 to 76083. PRUNUS SERRULATA Lindl.
Japanese flowering cherry.

76081. Tree 68. *Takinioi* (fragrant white cascade). Tree rather small and spreading, about 15 feet high; bark brownish gray; flowers pure white, single, very fragrant, about 1½ inches across, in clusters of three or four; blooming midseason.

For previous introduction see No. 69088.

76082. Tree 98. *Temari* (small ball). Bark gray; young foliage brownish green; buds deep pink; flowers semidouble, light pink, about 1¾ inches across, in numerous rather compact clusters of three and four, blooming midseason. A variety of special merit because of its floriferousness.

76083. Tree 104. *Yayeakebono* (double daybreak). Tree upright in habit; young foliage brownish green; buds pink, flowers semidouble, light pink at margins, nearly white in center, opening rather late, about 1¾ inches across. A very attractive variety.

76064 to 76085—Continued.

76084. PRUNUS SIEBOLDII (Carr.) Wittmack.

Tree 56. *Naden* (snowslide). Tree upright-spreading in habit, about 18 feet high; bark dark gray; flowers pink, semidouble, usually in clusters of three or four, about 1¾ inches across, blooming midseason. The hairy leaves of this variety distinguish it from the other double-flowering forms.

For previous introduction see No. 69090.

76085. PRUNUS SUBHIRTELLA PENDULA (Sieb.) Tanaka.

Trees 72, 75, 81. *Shidarehigan.* Trees usually not more than 30 feet in height, with slender, pendulous branches, narrowly oval leaves up to 3 inches long, and single flowers up to an inch across, appearing before the leaves and varying in color from deep pink to almost white. The black fruits are about three-eighths of an inch in diameter.

For previous introduction see No. 70787.

76086. ORMOSIA sp. Fabaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received March 2, 1928.

A large spreading tree with smooth clean bark, long pinnate light-green leaves, and long racemes of light-lavender flowers. It is native to Panama and is apparently a good shade tree for roadside planting.

76087 and 76088.

From Fa Hua Ssu Temple, Chihli, China. Scions obtained through Peter Liu, Peking. Received February 21, 1928.

76087. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

Tiger paw chestnut.

For previous introduction see No. 76010.

76088. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Mottled fragrant apricot. A freestone variety said to be the best in the Fa Hua Ssu region. The fruits are white with a pink blush, and are about 2 inches in diameter.

76089. CROTALARIA INCANA L. Fabaceae.

Seeds obtained from plants growing at the Barbour Lathrop Plant Introduction Garden, near Savannah, Ga. Received February 16, 1928.

A somewhat shrubby tropical American legume covered with soft gray pubescence and bearing elongated racemes of yellow flowers.

For previous introduction see No. 64059.

76090. DIOSPYROS GUAYPARIME Hort. Diospyraceae. **Persimmon.**

From Culiacan, Sinaloa, Mexico. Seeds presented by C. J. Stafford, through W. T. Swingle, Bureau of Plant Industry. Received March 8, 1928.

A variety grown locally.

76091. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

From Avery Island, La. Trees presented by E. A. McIlhenny, president, Jungle Gardens. Received March 10, 1928.

This orange is the result of hand-pollination of the Louisiana sweet on the Washington Navel and the selection of bud wood from trees which showed special merit. The fruits are of excellent quality.

76092. CUCURBITA FICIFOLIA Bouche. Cucurbitaceae.

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co., at the request of Dr. J. Dufrenoy. Received February 29, 1928.

Courge de Siam. A subtropical vine, becoming 10 to 15 feet long, with edible and ornamental fruits.

76093 and 76094. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From St. Lucia, West Indies. Seeds presented by E. A. Walters, agricultural superintendent of the St. Lucia Botanic Station. Received March 9, 1928.

Varieties grown locally.

76093. A red variety.

76094. A white variety.

76095 to 76104.

From Peradeniya, Ceylon. Seeds presented by the manager of the publication depot and central seed store of the Department of Agriculture. Received March 5, 1928.

76095. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

A tropical American creeping herb which forms a mat of foliage about 1½ feet in thickness. The stems, 3 to 10 feet long, form roots at each node. The pale-blue flowers are in racemes 1 to 4 inches long.

For previous introduction see No. 74576.

76096 to 76098. CRACCA spp. Fabaceae.

76096. CRACCA CANDIDA (DC.) Kuntze (*Tephrosia candida* DC.).

A low Himalayan shrub with slender branches and large clusters of reddish or white flowers.

For previous introduction see No. 67840.

76097. CRACCA VILLOSA HIRTA (Buch.-Ham.) Kuntze (*Tephrosia hookeriana* W. and A.).

A woody perennial with reddish flowers, native to the East Indies.

For previous introduction see No. 62908.

76098. CRACCA VOGELII (Hook. f.) Kuntze (*Tephrosia vogelii* Hook. f.).

A shrubby legume native to tropical Africa. The leaves are macerated and thrown into the water to kill fish.

For previous introduction see No. 73236.

76099 to 76101. CROTALARIA spp. Fabaceae.

76099. CROTALARIA ANAGYROIDES H. B. K.

A tropical American shrubby leguminous plant, up to 6 feet high, used as a cover plant in the East Indies.

For previous introduction see No. 76062.

76100. CROTALARIA JUNCEA L.

A variety grown locally.

For previous introduction see No. 74408.

76101. CROTALARIA USARAMOENSIS Baker f.

A variety grown locally.

For previous introduction see No. 69120.

76095 to 76104—Continued.

76102. DOLICHOS HOSEI Craib (*Vigna oligosperma* Hort.). Fabaceae.

A yellow-flowered leguminous vine used for a cover crop and for green manure.

For previous introduction see No. 39335.

76103. SESBANIA CANNABINA (Retz.) Poir. Fabaceae.

A variety grown locally.

For previous introduction see No. 30880.

76104. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

A variety grown locally.

76105 to 76118.

From Nogent sur Vernisson. Loiret, France. Seeds presented by L. Pardé, Directeur, Arboretum des Barres et Fruticetum Vilmorinianum. Received March 1, 1928.

76105. ACANTHOPANAX SESSILIFLORUM (Rupr. and Maxim.) Seem. Araliaceae.

A vigorous deciduous shrub which forms a large spreading bush 10 feet high, with 3-lobed or 5-lobed, irregularly toothed leaves. The flowers, brownish purple with yellow protruding stamens, are packed closely in a spherical, almost stalkless cluster about an inch in diameter and appear in July. The inky black berries are in round clusters about an inch thick. This is one of the hardiest shrubs introduced from northern China, where it is native.

For previous introduction see No. 72781.

76106. BUDDLEIA STENOSTACHYA Rehd. and Wils. Loganiaceae.

A western Chinese shrub up to 10 feet high, with lanceolate leaves 2 to 6 inches long and slender panicles of very small fragrant lavender flowers with orange eyes.

For previous introduction see No. 72822.

76107. CEANOTHUS DELILIANUS Spach. Rhamnaceae.

A late-flowering hybrid shrub of garden origin with dark-green leaves and pale to deep-blue flowers in lateral and terminal panicles.

For previous introduction see No. 73414.

76108. CLADRASTIS SINENSIS Hemsl. Fabaceae.

A western Chinese tree up to 75 feet high with compound leaves made up of 9 to 13 oblong leaflets. The white or pinkish pealike flowers are in branching panicles a foot long.

76109 to 76111. CLEMATIS spp. Ranunculaceae.

76109. CLEMATIS GLAUCA AKEBIOIDES (Maxim.) Rehd. and Wils.

A slender climber up to 10 feet high, native to western China. The pinnate to bipinnate leaves have 2-lobed to 3-lobed ovate leaflets and the flowers are bronze yellow.

For previous introduction see No. 53652.

76110. CLEMATIS GLOBULOSA Hort.

A European hybrid between two western American species, *Clematis douglasii scottii* and *C. texensis*. It has deep-purple, pitcher-shaped flowers.

For previous introduction see No. 73422.

76105 to 76118—Continued.

76111. CLEMATIS SERRATIFOLIA Rehder.

A woody climber 10 feet long, native to Chosen. The biternate leaves are made up of ovate-lanceolate serrate leaflets and the large yellow flowers with purple filaments are 2 inches across and appear in the autumn.

76112. COTONEASTER LINDLEYI Steud. Malaceae.

A Himalayan shrub or small tree with semideciduous dark-green leaves, corymbs of white flowers, and subglobose black fruits.

For previous introduction see No. 72871.

76113. HYPERICUM PATULUM Thunb. Hypericaceae. **Japanese hypericum.**

No. 6498 M. V. Variety *grandiflorum*. A large-flowered form of the Japanese hypericum which is a half-evergreen spreading shrub with golden-yellow flowers.

76114. LONICERA SYRINGANTHA Maxim. Caprifoliaceae. **Lilac honeysuckle.**

An upright, slender-branched shrub, 10 feet high, with pinkish white to rosy purple fragrant flowers and red fruits. It is native to northwestern China.

For previous introduction see No. 73442.

76115. LONICERA SYRINGANTHA WOLFII Rehder. Caprifoliaceae.

A variety that differs from the usual form in having partly prostrate branches, narrower leaves, and carmine flowers.

76116. SKIMMIA JAPONICA VEITCHII (Carr.) Rehder. Rutaceae.

A Japanese shrub up to 5 feet or more, with yellowish green leaves crowded at the ends of the branchlets, and coral-red or bright-scarlet fruits about one-third of an inch in diameter. It is said to be one of the best smoke-enduring evergreen shrubs, but is too tender to withstand the winters of the northern United States.

For previous introduction see No. 63381.

76117. SORBARIA ASSURGENS Vilm. and Bois. Rosaceae.

A tall handsome Chinese shrub up to 10 feet high, with pinnate leaves bearing falcate lanceolate-serrate leaflets and large panicles of small white flowers.

76118. SYCOPSIS SINENSIS Oliver. Hamamelidaceae.

An evergreen shrub or small tree 25 feet high, native to central and western China. The elliptic-ovate leaves are lustrous above and pale green beneath, and the small heads of flowers are conspicuous because of the red anthers.

76119 to 76170.

From Japan. Seeds and cuttings collected by R. K. Beattie, Bureau of Plant Industry. Received February and March, 1928.

76119. ILEX sp. Aquifoliaceae. **Holly.**

No. 666. Mountain side of Higashi-yama, near the Miyako Hotel, Kyoto, February, 1928. Seeds of an ornamental shrub or small tree, native to Japan, with red fruits which remain on the tree during the winter.

76120. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

No. 665. Kyotofu, Kadono Gun, Kyogoku Mura, Kori, February, 1928. These seeds were obtained through Professor Morishita, of the Kyoto Agricultural Experiment Station. *Koridiakon*. A white radish grown only by the gardeners of the imperial household. It is very slender, almost like a lead pencil, and in deep soil it grows 16 to 18 inches long.

76119 to 76170—Continued.

76121 to 76170. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

Nos. 76121 to 76156 are cuttings of cultivated varieties from Tateno farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken.

76121. Nos. 267 to 269. *Osaya*. A variety producing an abundance of small nuts early in September. A varietal characteristic is the very slender twigs.

76122. Nos. 270 to 272. *Ichiemon*. A variety producing medium-sized nuts the latter part of September to the first part of October. The nuts are of a better flavor than those of the Kenaga, Nos. 345 to 347 [No. 76147], which this variety resembles. The burs do not fall to the ground but crack and spill the nuts.

76123. Nos. 273 to 275. *Wazo*. A variety producing medium-sized to large nuts the middle of October.

76124. Nos. 276 to 278. Mr. Tateno found an unnamed tree in a shipment and thought it was a seedling. He presented it to the Emperor after it had been propagated, and it was named Banseki by Mr. Kumagaya, a chestnut expert, about seven years ago. It is a fast grower, and produces rather large nuts from the latter part of October to the first part of November.

76125. Nos. 279 to 281. *Kanotsume*. A variety producing medium-sized nuts from the latter part of September to the first part of October. The nuts are said to be of good quality and the sweetest in Japan.

76126. Nos. 282 to 284. *Deno*. A variety producing medium-sized nuts the first part of October, and is said to give the biggest yield in Japan. After the first four or five years from the graft, it is a fast grower.

76127. Nos. 285 to 287. *Ginyose*. A variety fruiting the latter part of September.

76128. Nos. 288 to 290. *Chobei*. A variety originated by Mr. Deno at Wachi, near Kyoto. The rather large nuts are produced the middle of October.

76129. Nos. 291 to 293. *Shogatsu*. A rapid grower producing an abundance of medium-sized nuts the middle of October.

76130. Nos. 294 to 296. *Bon-guri* (local name). A variety improved from a wild chestnut. It is a rapid grower producing medium-sized nuts the first part of September.

76131. Nos. 297 to 299. *Kinseki*. A rapid grower producing an abundance of small to medium-sized nuts the latter part of September.

76132. Nos. 300 to 302. *Imakita*. A variety producing an abundance of small to medium-sized nuts the latter part of September.

76133. Nos. 303 to 305. The varietal name is unknown. A rapid and strong grower producing an abundance of medium-sized nuts from the first to the middle of October. This tree was selected from the trees grown from 1,000 nuts of mixed varieties.

76134. Nos. 306 to 308. *Taisho-wase*. A variety fruiting the latter part of August. The nuts are large for an early variety, this being one of the earliest.

76135. Nos. 309 to 311. *Chokogi* (synonyms *O-tamba, Bansei-tamba*). A tall strong tree producing nuts from the first to the middle of October. The kernel often splits into two or three parts, and the skin of the kernel (tannin part) is often quite thick.

76119 to 76170—Continued.

76136. Nos. 312 to 314. *Chusei-tamba.* A midseason variety of Tamba which fruits from the middle to the latter part of September. It is probably a seedling of Ginyose, according to Mr. Kumagaya (the chestnut expert). The nuts are quite large and of good quality. This is the best variety for marron material.

76137. Nos. 315 to 317. *Ganne.* A variety, with drooping branches when young, which fruits the first part of October. A very characteristic gall is abundant on this variety and seemingly on this only. It looks like insect work but insects may be secondary.

76138. Nos. 318 to 320. An unnamed seedling from Kinseki. A very rapid grower fruiting the middle of October. The nuts are very large, even larger than Chokoji.

76139. Nos. 321 to 323. *Toyotama.* A very early variety, fruiting from the 15th to the 25th of August. The nuts are small, but because they are so early they sell at a high price.

76140. Nos. 324 to 326. Varietal name unknown. *Butsake* (local name). A rapid grower producing a large crop the latter part of September. The nuts are quite large like those of Chusei-tamba, Nos. 312 to 314 [No. 76136].

76141. Nos. 327 to 329. An unnamed seedling. A rapid grower producing medium-sized nuts of good quality from the last of September to the early part of October.

76142. Nos. 330 to 332. *Sakamoto.* A medium-strong grower fruiting from the first to the middle of September. Though the crop is not large the nuts are very good.

76143. Nos. 333 to 335. *Mino.* A rare variety which was exhibited in London 20 years ago and awarded a gold medal. The nuts are produced the first part of October. This variety resembles Bansei-tamba, but the nuts are produced a little earlier.

76144. Nos. 336 to 338. *Shimokatsugi.* A fast-growing variety fruiting the middle of October. The crops are produced in alternate years. The nuts are covered with white hairs, whence the varietal name. The tannin is easy to remove when the nuts are cooked.

76145. Nos. 339 to 341. *Inukoroshi.* A medium grower producing large nuts the first part of October. This is not a good quality.

76146. Nos. 342 to 344. *Ashigara-wase.* An early variety fruiting the first part of September. It is not a strong grower.

76147. Nos. 345 to 347. *Kenga.* A rapid grower producing a good crop of medium-sized nuts the latter part of September to the first part of October. The burs crack early and drop the nuts.

76148. Nos. 348 to 350. *Oda-wase.* A medium grower producing a large crop of small to medium-sized nuts the first part of September.

76149. Nos. 351 to 353. *Kinyoshi.* A very good variety producing sweet rich nuts.

76150. Nos. 354 to 356. An unknown variety originally from Kanagawa. A rapid grower producing a medium crop of medium-sized nuts from the latter part of September to early October. The quality of the nuts is not very good. The trees grow too high.

76119 to 76170—Continued.

76151. Nos. 357 to 359. *Hassaku.* A rapid grower producing a good crop of medium-sized nuts in early September.

76152. Nos. 360 to 362. An unknown variety originally from Ayabe. A rapid grower producing a good crop of small to medium-sized nuts the first part of September.

76153. Nos. 363 to 365. *Tatsu-no-suke.* A very rapid grower producing medium-sized nuts the latter part of September. The tree is good but the nuts are not of very good quality.

76154. Nos. 366 to 368. *Wase-tamba.* A rapid grower producing medium to large nuts the first part of September.

76155. Nos. 369 to 371. An unknown variety originally from Angyo. A very strong rapidly growing tree producing large nuts of very good quality the first part of October. A good crop is produced the first five or six years, then poor ones.

76156. Nos. 372 to 374. *Tateno* No. 1. A seedling of Chusei-tamba, Nos. 312 to 314 [No. 76136]. A tall strong rapidly growing tree producing a medium crop of large nuts. The brown leaves remain on the tree through the winter.

Nos. 76157 to 76164 are cuttings of varieties from Wakahayashi, Nogi Mura, Shimotsuga Gun, Tochigi Ken.

76157. Nos. 375 to 377. *Shiba-guri, Motokichi* No. 1. A wild variety growing in a dense stand. The tree is a strong grower, producing a good crop of large nuts the first part of October.

76158. Nos. 378 to 380. *Shiba-guri, Motokichi* No. 2. A wild variety producing a good crop of small nuts the middle of October.

76159. Nos. 381 to 383. *Otamba* No. 1, *Iwase.* A cultivated seedling variety producing large nuts the middle of September. The tree is a rapid grower.

76160. Nos. 384 to 386. *Otamba* No. 2, *Iwase.* A rapidly growing cultivated seedling tree producing a good crop of nuts the middle of October.

76161. Nos. 387 to 389. *Otamba* No. 3, *Iwase.* A cultivated seedling tree which is a strong rapid grower. The nuts, produced the first part of October, are not very large.

76162. Nos. 390 to 392. *Otamba, Uehara.* A cultivated seedling tree which is a strong rapid grower. A medium crop of large nuts is produced the first part of October.

76163. Nos. 393 to 395. *Shiba-guri* No. 1, *Kobayashi.* A rapidly growing wild variety producing a good crop of medium-sized nuts the middle of September. The mother tree was the largest chestnut in this region.

76164. Nos. 396 to 398. *Shiba-guri* No. 2, *Kobayashi.* A rapidly growing wild variety producing medium to large-sized nuts.

Nos. 76165 to 76170 are cuttings of cultivated varieties from Fukuchi farm, Mamada-cho, Nishi-kuroda, Shimotsuga Gun, Tochigi Ken.

76165. Nos. 399 to 401. *Fukuchi, Kinseki.* A variety producing a good crop of medium-sized light golden-red nuts.

76166. Nos. 402 to 404. *Fukuchi, Kamasuguri.* A wide-spreading rapidly growing tree producing medium-sized nuts. A good crop is produced every year, but the skin of the nut cracks.

76119 to 76170—Continued.

76167. Nos. 405 to 407. *Yoro.* A rapidly growing variety producing large sweet nuts the first part of October. This is the best and strongest variety in the Fukuchi orchard.

76168. Nos. 408 to 410. *Teteuchi.* A rapidly growing strong tree producing medium-sized nuts of good color the first part of September.

76169. Nos. 411 to 413. *Fukuchi Bon-guri.* A seedling originally from *Bon-guri,* Nos. 294 to 296 [No. 76130]. A rapidly growing tall strong tree producing medium-sized very sweet nuts, brown with white hairs, the first part of September. A good crop is produced every year.

76170. Nos. 414 to 416. *Toyotama-wase.* A rapidly growing seedling tree producing a good crop of small dark nuts the first part of September.

76171. Colocasia sp. Araceae.

From the Azores. Tubers presented by B. L. Feinstein, of the Tropical Fruit & Produce Co., New Bedford, Mass., through R. A. Young, Bureau of Plant Industry. Received March 17, 1928.

The corms of this variety are acrid and require longer cooking than the dasheen. The flesh is moist, rather soft when cooked, and of inferior flavor. The quality is similar to that of the "blue tanyah" of the South Atlantic States.

76172 to 76182. Cajanus indicus Spreng. Fabaceae. Pigeon pea.

From San Juan, Porto Rico. Seeds presented by O. W. Barrett, Agricultural Director of the Department of Agriculture and Labor. Received March 14, 1928.

Varieties grown locally.

76172. *Americanos.*
76173. *Chinos.*
76174. *Colmenos.*
76175. *Cubanos.*
76176. *Indios.*
76177. No. 1758. *Manchados.*
76178. *New Era.*
76179. *Parranetos.*
76180. *Pepino.*
76181. *San Salvador.*
76182. No. 12.

76183 to 76190.

From Brooklyn, N. Y. Seeds presented by the Brooklyn Botanic Garden. Received March 10, 1928.

76183. Callicarpa giraldiana Hesse. Verbenaceae.

A Chinese shrub 10 feet high, with membranous, light-green leaves, cymes of pink flowers, and dense clusters of round berrylike violet fruits.

For previous introduction see No. 63678.

76184. Citrus taitensis Risso. Rutaceae. **Otaheite orange.**

A dwarf shrub, probably of hybrid origin, with lemonlike flowers and orange-colored fruits shaped like a lemon, but having a mawkish taste. It is used rarely as a dwarfing stock for other citrus fruits.

76185. Deutzia schneideriana laxiflora Rehder. Hydrangeaceae.

A handsome free-flowering central Chinese shrub 6 feet high, with oblong-ovate leaves and broad loose panicles of white flowers.

For previous introduction see No. 55087.

76183 to 76190—Continued.

76186. Deutzia wilsoni Duthie. Hydrangeaceae.

A red-barked shrub, native to central China, with stellate pubescent leaves and loose broad corymbs of white flowers, each nearly an inch in diameter.

For previous introduction see No. 73435.

76187. Enkianthus deflexus (Griffith) C. Schneid. Ericaceae.

A western Chinese shrub or small tree with red branchlets, obovate leaves 1 to 3 inches long, and many-flowered racemes of yellowish red flowers with darker veins.

For previous introduction see No. 58906.

76188. Schizandra chinensis (Turcz.) Baill. Magnoliaceae.

A woody Chinese climber, up to 25 feet high, with broadly obovate leaves, creamy white or pinkish fragrant flowers, and scarlet fruits.

For previous introduction see No. 73058.

76189. Viburnum hupehense Rehder. Caprifoliaceae. **Hupeh viburnum.**

A central Chinese shrub about 6 feet high, with coarsely dentate pubescent ovate leaves, small cymes of white flowers and red berries.

For previous introduction see No. 71255.

76190. Viburnum taoueth Leveille. Caprifoliaceae.

A shrub with smooth gray twigs, lanceolate dentate leaves 2 inches long, corymbs of small white flowers, and yellow fruits. Native to Chosen.

76191 to 76195. Rhododendron spp. Ericaceae.

From London, England. Seeds collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild. Received March 14, 1928.

A collection of rhododendrons from western China.

76191. Rhododendron macabeanum Watt.

No. 7724. A tree 50 feet high, with twigs and leaves covered with brown scales. The leathery oblong leaves, 10 to 12 inches long, are in rosettes at the ends of the branches, and the yellowish white flowers, in compact umbels, are 2 inches long.

76192. Rhododendron manipurense Balf. and Watt.

No. 7723. A shrub 10 feet high, with shining oblong leaves 3 to 5 inches long and clusters of large, white flowers 3 to 4 inches in diameter.

76193. Rhododendron sp.

No. 7717.

76194. Rhododendron sp.

No. 7725.

76195. Rhododendron sp.

No. 7731.

76196 to 76198. Ananas sativus Schult. f. Bromeliaceae. Pineapple.

From the Philippine Islands. Suckers presented by S. Youngberg, Director of the Bureau of Agriculture, Manila. Received March 14, 1928.

Suckers grown at the Lamao Experiment Station, Lamao, Bataan.

76196. *Black Prince.*

76197. *Orion.*

76198. *Los Banos.*

76199. BROMELIA PINGUIN L. Bromeliaceae. **Pinguin.**

From San Juan, Porto Rico. Offshoots presented by O. W. Barrett, Agricultural Director of the Department of Agriculture and Labor. Received February 21, 1928.

A West Indian succulent plant, 3 to 4 feet high, with spiny margined leaves which turn red with age. The reddish flowers are in dense panicles, and the acid fruits, the size of plums, furnish a cooling juice.

For previous introduction see No. 54798.

76200 to 76202. PRUNUS spp. Amygdalaceae.

From Auckland, New Zealand. Bud wood obtained from George A. Green, of the New Zealand Association of Nurserymen. Received at the United States Plant Introduction Garden, Chico, Calif., in May, 1925. Numbered in January, 1928.

76200 and 76201. PRUNUS ARMENIACA L. **Apricot.**

76200. *Bolton.* An excellent canning apricot which is a good shipper and very popular. It comes in just after the midseason variety, *Moorpark.*

76201. *Newcastle.* An early, upright-growing variety producing an abundance of medium-sized, freestone fruits which are yellow with a red cheek and are rich in flavor.

76202. PRUNUS SALICINA Lindl. **Japanese plum.**

Purple king. A handsome, nearly spherical fruit of a deep-wine or cherry-red color. The quality is said to be good with regard to flavor and texture of flesh, and it is reported as being an excellent shipper.

76203 to 76279.

From Kew, England. Seeds presented by Dr. A. W. Hill, Director of the Royal Botanic Gardens. Received March 9, 1928.

76203. ACANTHOPANAX SESSILIFLORUM (Rupr. and Maxim.) Seem. Araliaceae.

For previous introduction and description see No. 76105.

76204 to 76209. ALLIUM spp. Liliaceae. **Onion.**

76204. ALLIUM BEESIANUM W. W. Smith.

An ornamental western Chinese onion, 9 to 18 inches high, with pendulous blue flowers.

For previous introduction see No. 69900.

76205. ALLIUM KANSUENSE Regel.

An ornamental blue-flowered onion native to northwestern China.

For previous introduction see No. 69902.

76206. ALLIUM KARATAVIENSE Regel.

A broad-leaved onion, native to Turkestan, with dense umbels of pink flowers.

For previous introduction see No. 73600.

76207. ALLIUM NARCISSIFLORUM Vill.

An Italian onion, about 9 inches high, with rose-colored flowers in nodding heads,

For previous introduction see No. 73524.

76208. ALLIUM OSTROWSKIANUM Regel.

A Turkestan onion with rose-colored flowers produced freely in many-flowered umbels on scapes 6 inches high.

For previous introduction see No. 73527.

76203 to 76279—Continued.

76209. ALLIUM ROSENBACHIANUM Regel.

A bulbous perennial, native to Turkestan, with oblong-lanceolate leaves 8 inches high and a large globular umbel of purple flowers on a scape 2 feet high.

76210. ALNUS HIRSUTA Turcz. Betulaceae. **Manchurian alder.**

A rather handsome, medium-sized tree, native to Japan and Manchuria, with rounded elliptic, slightly lobed leaves which are hairy beneath.

For previous introduction see No. 73403.

76211. ARBUTUS UNEDO L. Ericaceae. **Strawberry tree.**

An Irish evergreen tree up to 40 feet high, with smooth dark-green leaves 2 to 4 inches long, flowers produced from October to December in drooping panicles 2 inches long and wide, and globose, strawberrylike fruits, three-fourths of an inch across, which are orange-red and rough on the surface. They ripen during the autumn following the production of the flowers, at the same time as the succeeding crop of blossoms.

For previous introduction see No. 41502.

76212 to 76218. BERBERIS spp. Berberidaceae. **Barberry.**

76212. BERBERIS ATROCARPA C. Schneid.

An ornamental Chinese shrub, 3 to 5 feet high, with leathery evergreen leaves, shining rich green above and yellowish green beneath, and almost globose jet-black fruits.

For previous introduction see No. 65224.

76213. BERBERIS BEANIANA C. Schneid.

A semievergreen Chinese shrub with long yellow spines, yellow flowers, and purple ellipsoidal fruits.

For previous introduction see No. 65225.

76214. BERBERIS DARWINII Hook. **Darwin barberry.**

A tender evergreen shrub, 6 feet or more high, native to southern Chile. The spectacular orange flowers are succeeded by oval plum-colored berries.

For previous introduction see No. 73531.

76215. BERBERIS LYCIUM Royle.

A half-evergreen shrub, 10 feet high, with narrow, bright-green leaves and pale-yellow flowers followed by ovoid violet berries. It is native to northern India.

For previous introduction see No. 58139.

76216. BERBERIS THIBETICA C. Schneid.

A semideciduous shrub, 3 to 4 feet tall, with purplish glaucous branches, entire leaves which are whitish beneath, and yellow flowers followed by dull reddish berries. It is native to western China.

For previous introduction see No. 58133.

76217. BERBERIS VIRESCENS Hook. f.

A deciduous Himalayan shrub, 6 to 9 feet high, with smooth reddish shining branches, slender spines sometimes three-fourths of an inch long, bright-green leaves, pale sulphur-yellow flowers, and slender reddish berries.

For previous introduction see No. 58803.

76218. BERBERIS YUNNANENSIS Franch.

A deciduous shrub, 3 to 6 feet high, with dense rounded spines, nearly circular leaves, pale-yellow flowers, and bright-red berries. It is native to western China.

For previous introduction see No. 66544.

76203 to 76279—Continued.

76219. BUDDLEIA STENOSTACHYA Rehd. and Wils. Loganiaceae.

An ornamental shrub up to 10 feet high, with lanceolate leaves 2 to 6 inches long and slender panicles of fragrant lavender flowers with orange eyes. It is native to western China.

For previous introduction see No. 76106.

76220. CARMICHAELIA ARBOREA (Forst. f.) Druce (*C. australis* R. Br.). Fabaceae.

A New Zealand shrub up to 9 feet high, leafless after the seedling stage. The very flat branches have alternate notches from which appear the fascicles of 3 to 12 fragrant flowers which are delicate lilac striped with darker lines. The sides of the small black pods fall away, leaving the scarlet seeds suspended in the thickened edges.

For previous introduction see No. 72787.

76221. CASSINIA FULVIDA Hook. f. Asteraceae.

A New Zealand shrub, 3 to 5 feet high, with very small leaves covered, especially on the under surfaces, with yellow tomentum, and small heads of white flowers.

For previous introduction see No. 73408.

76222. CASSINIA VAUVILLIERSII (Homb. and Jacq.) Hook. f. Asteraceae.

An erect compact shrub, 6 to 10 feet high, with small narrow leathery leaves half an inch long and terminal corymbs of white flowers. It is native to New Zealand.

For previous introduction see No. 73410.

76223. CISTUS CORBARIENSIS Pourr. Cistaceae.

An ornamental Spanish shrub up to 5 feet high, with white flowers about an inch in diameter.

For previous introduction see No. 73263.

76224. CLEMATIS CHRYSOCOMA SERICEA (Franch.) C. Schneid. (*C. spooneri* Rehd. and Wils.). Ranunculaceae.

An ornamental Chinese vine up to 20 feet long, with silky hairy rounded leaves and solitary or paired pinkish flowers 3 to 4 inches in diameter.

For previous introduction see No. 72793.

76225. COLCHICUM BIVONAE Guss. Melanthiaceae. **Autumn crocus.**

An autumn-flowering bulbous perennial native to the Mediterranean region. The six to nine flat linear leaves a foot long appear in the spring, dying off by midsummer. The one to six rosy purple flowers 4 to 6 inches long appear from the naked earth.

76226. COLCHICUM BYZANTINUM Ker. Melanthiaceae. **Autumn crocus.**

An autumn-flowering bulbous perennial native to Rumania. The five or six oblong leaves, a foot long and 4 inches wide, appear in the spring and die away by midsummer. The lilac-purple flowers which are borne in clusters of 12 to 20 are 3 to 4 inches in diameter and spring from the bare soil.

76227 to 76240. COTONEASTER spp. Malaceae.

76227. COTONEASTER AFFINIS Lindl.

A tall Himalayan shrub with large cymes of white flowers and reddish brown fruits.

For previous introduction see No. 53667.

76228. COTONEASTER AFFINIS BACILLARIS (Wall.) C. Schneid.

A form of *Cotoneaster affinis* which has smoother leaves and is usually a larger plant, sometimes becoming a tree, the wood of which is used for walking sticks and spear shafts.

For previous introduction see No. 66924.

76203 to 76279—Continued.

76229. COTONEASTER AMBIGUA Rehd. and Wils.

A western Chinese shrub, 6 to 8 feet high, with clusters of pinkish flowers and black fruits.

For previous introduction see No. 44077.

76230. COTONEASTER AMOENA Wilson.

A branching shrub, 3 to 5 feet high, native to Yunnan, China. The oval leaves are glossy green above and thickly coated with gray wool underneath. The small cymes of white flowers are followed by bright-red fruits.

For previous introduction see No. 53670.

76231. COTONEASTER APICULATA Rehd. and Wils.

A semideciduous Chinese shrub, up to 8 feet high, but usually low growing in cultivation, with round leaves, pinkish white flowers, and relatively large bright-red fruits which sit upon the upper side of the twigs.

For previous introduction see No. 53671.

76232. COTONEASTER HEBEPHYLLA Diels.

A Chinese shrub up to 18 feet high, with spreading branches, white flowers, and dark-red fruits.

For previous introduction see No. 58147.

76233. COTONEASTER HENRYANA (C. Schneid.) Rehd. and Wils.

An ornamental shrub, native to central China, 10 to 15 feet high, with clusters of white flowers bearing purple anthers and followed by dark-crimson fruits.

For previous introduction see No. 53681.

76234. COTONEASTER HUPEHENSIS Rehd. and Wils.

A handsome Chinese shrub, about 6 to 8 feet high, with long arching branches studded with clusters of white flowers which are followed by bright-red fruits in the autumn when the leaves turn yellow.

For previous introduction see No. 58148.

76235. COTONEASTER LINDLEYI Steud.

A large shrub or small tree with corymbs of white flowers and bluish black fruits. Native to the northwestern Himalayan region.

For previous introduction see No. 76112.

76236. COTONEASTER MELANOCARPA Lodd.

A spreading shrub, about 6 feet high, native to Europe and Asia. The ovate leaves are dark green above and white tomentose beneath, and the pinkish flowers and black fruits are in nodding clusters.

For previous introduction see No. 36740.

76237. COTONEASTER MELANOCARPA LAXIFLORA (Jacq.) C. Schneid.

An Asiatic form of *Cotoneaster melanocarpa* which has larger leaves and larger pendulous clusters of flowers and fruits.

For previous introduction see No. 72796.

76238. COTONEASTER OBSCURA Rehd. and Wils.

A western Chinese shrub, about 10 feet high, with ovate dull-green leaves, short dense cymes of pinkish flowers, and dark-red pear-shaped fruits.

For previous introduction see No. 44081.

76239. COTONEASTER RUBENS W. W. Smith.

A nearly prostrate Chinese shrub, 2 to 4 feet high, with small orbicular leaves and small axillary red flowers.

76203 to 76279—Continued.

76240. COTONEASTER TURBINATA Craib.

A Chinese shrub, 6 feet high, with ovate-lanceolate leaves 1 to 2 inches long, dense corymbs of small white flowers appearing six to eight weeks later than any other Cotoneaster, and followed by bright-red turbinate fruits.

76241 to 76247. CYTISUS spp. Fabaceae. **Broom.**

76241. CYTISUS AUSTRIACUS L.

A shrub about 3 feet high, native to southeastern Europe. The trifoliolate leaves are silky pubescent, and the bright-yellow flowers are in headlike clusters.

76242. CYTISUS AUSTRIACUS HEUFFELII (Wirzb.) C. Schneid.

A Hungarian form of *Cytisus austriacus* which is more slender and has narrower leaves and more silky pods.

76243. CYTISUS GRANDIFLORUS (Brot.) DC.

A spineless Spanish shrub with trifoliolate leaves and large yellow flowers on long rodlike branches.

For previous introduction see No. 66556.

76244. CYTISUS NIGRICANS L.

An upright shrub about 6 feet high, native to southern Europe. The obovate leaflets are an inch long, and the yellow flowers are borne in terminal racemes a foot long.

For previous introduction see No. 73540.

76245. CYTISUS PURPUREUS Scop.

A procumbent shrub with erect branchlets 1 or 2 feet high, dark-green obovate leaflets, and purple flowers; native to Austria and Italy.

For previous introduction see No. 73543.

76246. CYTISUS SPACHIANUS (Webb.) Kuntze.

A Canary Island shrub, 6 to 8 feet high, with elongated racemes of fragrant bright-yellow flowers.

For previous introduction see No. 31905.

76247. CYTISUS SUPINUS L. **Bigflower broom.**

An erect or procumbent shrub about 3 feet high, native to central and southern Europe. It has elliptic leaflets and long terminal heads of yellow flowers, besides bearing axillary flowers in the spring.

For previous introduction see No. 66926.

76248. DEUTZIA LONGIFOLIA VEITCHII (Veitch) Rehder.

A rather tender Chinese shrub 6 feet high, with lanceolate leaves 3 to 6 inches long and dense corymbs of bright rose-purple flowers.

For previous introduction see No. 73431.

76249. GENISTA PILOSA L. Fabaceae. **Silkyleaf broom.**

A procumbent European shrub with ascending branchlets, simple oblong leaves, and short axillary racemes of yellow flowers.

For previous introduction see No. 66570.

76250. GENISTA TINCTORIA VIRGATA Koch. Fabaceae.

A larger and more branching form of *Genista tinctoria*, which is an upright shrub 3 feet high, with many-flowered terminal racemes of yellow flowers. It is native to Europe.

76203 to 76279—Continued.

76251. IRIS CLARKEI Baker. Iridaceae. **Clarke iris.**

A curiously local Himalayan iris native to a circumscribed area in the Sikkim and Bhutan region at altitudes between 6,000 and 11,000 feet, in ground that is swampy half the year and frozen hard under snow during most of the remaining months. The narrow leaves, 2 feet long, droop at the tops; the upper surface is polished and shiny, the under side being glaucescent. The solid stem is 2 feet long and bears one or two lateral heads. The falls are blue-purple, blotched with white, and are reflexed laterally. The upper part of the haft is marked with yellow. The reddish purple, lanceolate standards are poised almost horizontally. The styles form the highest point of the flowers; they are keeled, very convex, and 1½ inches long.

For previous introduction see No. 67034.

76252. IRIS WILSONI Wright. Iridaceae. **Wilson iris.**

A western Chinese swamp iris, a foot high, with yellow flowers having the falls faintly veined with purple.

For previous introduction see No. 73547.

76253. LIGUSTRUM COMPACTUM Hook f. and Thoms. (*L. yunnanese* L. Henry). Oleaceae. **Privet.**

A shrub or small tree, sometimes 30 feet high, native to the Himalayan region and to southwestern China. The half-evergreen leaves are 3 to 6 inches long, and the small white flowers in large panicles are followed by bluish black fruits.

For previous introduction see No. 66962.

76254. LIGUSTRUM INSULENSE Decaisne (*L. insulare* Decaisne). Oleaceae. **Privet.**

A shrub, closely related to the common privet, *Ligustrum vulgare*, becoming 6 feet high, with yellowish green, often pendulous leaves, and rather large flower panicles. It is of unknown origin.

For previous introduction see No. 66580.

76255. LILIUM PYRENAICUM Gouan. Liliaceae. **Lily.**

A lily, 2 to 4 feet high, with lemon-yellow flowers dotted purplish black. It is native to the Pyrenees Mountains.

For previous introduction see No. 69926.

76256 to 76266. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

76256. LONICERA ALPIGENA L.

For previous introduction and description see No. 75984.

76257. LONICERA CHRYSANTHA Turcz. **Coralline honeysuckle.**

An upright eastern Asiatic shrub, 12 feet high, with dark-green ovate leaves, creamy white flowers changing to yellow, and handsome coral-red berries.

For previous introduction see No. 67367.

76258. LONICERA CHRYSANTHA LATIFOLIA Korsh. (*L. chrysantha turkestanica* Rehder).

A form of *Lonicera chrysantha* with broadly elliptic thickish leaves.

76259. LONICERA DEFLEXICALYX Batal.

A western Chinese upright shrub, 8 to 10 feet high, with arching branches, bright-green lanceolate leaves, creamy flowers changing to yellow, and brick-red fruits.

For previous introduction see No. 53708.

76203 to 76279—Continued.

76260. LONICERA HISPIDA Pall.

A western Chinese shrub, 3 to 5 feet high, with oblong leaves, yellowish flowers over an inch long subtended with whitish bracts nearly an inch long and followed by oblong bright-red berries.

For previous introduction see No. 42316.

76261. LONICERA LANCEOLATA Wall.

A Himalayan shrub, 10 to 15 feet high, with ovate leaves, pale violet flowers, and black fruits.

For previous introduction see No. 53710.

76262. LONICERA MINUTIFLORA Zabel.

A hybrid between *Lonicera morrowii* and *L. zylosteoides*, with rather small oblong leaves and small flowers.

76263. LONICERA MUSCAVIENSIS Rehder.

A hybrid between *Lonicera morrowii* and *L. ruprechtiana*, differing from the former in having acuminate leaves and from the latter in having longer pubescent bracts.

76264. LONICERA OBOVATA Royle.

A Himalayan shrub, about 6 feet high, with obovate leaves, nodding whitish flowers, and blue-black fruits.

For previous introduction see No. 53713.

76265. LONICERA SEGREZIENSIS Lavall.

An upright shrub, about 10 feet high, with dark bluish green leaves, yellowish flowers, and dark-red fruits. It is supposed to be a hybrid between *Lonicera xylosteum* and *L. quinquelocularis*.

76266. LONICERA TATARICA L. **Tartarian honeysuckle.**

Variety *Finzleyi*. A variety of the common Tartarian honeysuckle for which a description has not been found.

76267. NARCISSUS BULBOCODIUM L. Amaryllidaceae. **Petticoat daffodil.**

A long-trumpet yellow daffodil with a thin flaring corona 2 inches long. It is native to the Mediterranean region.

For previous introduction see No. 66590.

76268. NARCISSUS CYCLAMINEUS Baker. Amaryllidaceae. **Daffodil.**

A drooping long-trumpet daffodil with the lemon-yellow perianth segments reflexed and the crenate crown orange-yellow. It is native to Portugal.

76269. PAEONIA WOODWARDII Hort. Ranunculaceae. **Peony.**

A description or place of publication for this form has not been found.

76270. PENTSTEMON SCOULERI Lindl. Scrophulariaceae.

A herbaceous perennial, native to Oregon, with narrowly lanceolate leaves and terminal racemes of violet-purple flowers.

76271. PERNETTYA MUCRONATA (L. f.) Gaud. Ericaceae. **Broadleaf pernettya.**

A Magellan evergreen shrub, 2 feet high, with small ovate spiny pointed leaves, nodding pink-tinged flowers, and white to dark-purple fruits, half an inch long, which stay on the branches all winter.

For previous introduction see No. 73444.

76203 to 76279—Continued.

76272. ROMULEA CRUCIATA Eckl. Iridaceae.

A South African small bulbous perennial with narrowly lanceolate leaves 8 inches long and scapes 6 inches high with pink flowers 2 inches in diameter.

76273. ROSA SPINULIFOLIA Dematra. Rosaceae. **Rose.**

A European shrub, 3 to 4 feet high, with reddish brown stems and red thorns, five ovate-serrate leaflets, small single pale pink flowers, and obovate fruits at first purple but finally turning black.

76274. STAPHYLEA COLCHICA COULOMBIERI (Andre) Zabel. Staphyleaceae. **Bladdernut.**

A vigorous form with larger acuminate leaflets of *Staphylea colchica* which is an upright shrub with five leaflets, 6-inch panicles of white flowers, and obovoid 2-lobed to 3-lobed bladdery fruits. Native to the Caucasus region.

76275. STYRAX WILSONII Rehder. Styracaceae. **Chinese snowbell.**

A handsome free-flowering western Chinese shrub which begins flowering when only a few inches high. It becomes 12 feet high and has ovate leaves, clusters of white flowers, and small grayish fruits.

For previous introduction see No. 66608.

76276. SYRINGA TOMENTELLA Bur. and Franch (*S. wilsonii* C. Schneid.). Oleaceae. **Wilson lilac.**

A slender Chinese shrub about 10 feet high, with oblong-lanceolate leaves and loose panicles of white to lilac flowers.

For previous introduction see No. 73284.

76277. SYRINGA YUNNANENSIS Franch. Oleaceae. **Yunnan lilac.**

An upright shrub, 8 to 10 feet high, native to Yunnan, China, with slender panicles of pink flowers.

For previous introduction see No. 73450.

76278. VIBURNUM VEITCHI C. H. Wright. Caprifoliaceae. **Veitch viburnum.**

A central Chinese shrub, 5 to 7 feet high, with branchlets, leaves, and flower stalks stellate-pubescent. The white flowers are in dense cymes 6 inches across, and the fruits are red at first, finally changing to black.

For previous introduction see No. 62589.

76279. VITIS KAEMPFERI Koch (*V. coignetiae* Pulliat). Vitaceae. **Grape.**

A handsome ornamental Japanese vine with orbicular-ovate leaves a foot across which turn crimson in the autumn. The black fruits, with a purple bloom, are not edible.

For previous introduction see No. 63388.

76280 to 76297. HORDEUM spp. Poaceae.

From Baghdad, Iraq. Seeds presented by J. F. Webster, Inspector General of Agriculture. Received March 8, 1928.

Iraqi barley grown at Rustam.

76280 to 76283. HORDEUM DISTICHON NIGRICANS Seringe. **Two-rowed barley.**

76280. No. B–112.
76281. No. B–113.
76282. No. B–114.
76283. No. B–127.

76280 to 76297—Continued.

76284 to 76286. HORDEUM VULGARE NIGRUM (Willd.) Beaven. Six-rowed barley.

76284. No. B-87.
76285. No. B-94.
76286. No. B-97.

76287 to 76297. HORDEUM VULGARE PALLIDUM Seringe. Six-rowed barley.

76287. No. B-22.
76288. No. B-23.
76289. No. B-33.
76290. No. B-53.
76291. No. B-57.
76292. No. B-65.
76293. No. B-75.
76294. No. B-76.
76295. No. B-85.
76296. No. B-90.
76297. No. B-135.

76298 to 76307.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received March 8, 1928.

76298 to 76303. CAPSICUM ANNUUM L. Solanaceae. Red pepper.

76298. *Chameleon.* A dwarf variety with numerous erect, conical fruits which are at first yellow, changing to violet and scarlet.

76299. *Early dwarf red squash.* An early dwarf variety with flat, pendent, tomato-shaped, more or less ribbed fruits about 2 inches in diameter and an inch in depth, which are bright red and of a rather mild taste.

76300. *Golden dawn.* A dwarf, branching, productive variety with pendent fruits, about 1½ inches in length and thickness, which are a beautiful bright yellow.

76301. *Long red.* A variety with slender, conical, often curved and twisted pendent fruits, about 4 inches long and an inch in diameter at the base, which are a brilliant red when ripe and usually rather pungent.

76302. *Sweet Genua.* An early variety with distinct, conical or heart-shaped pendent fruits which are bright red, thick fleshed, and of a very mild flavor.

76303. *Yellow half-long Antibes.* An early variety, about 16 inches high, bearing numerous rather sweet pendent fruits of which the shape is approximately that of a triangular prism with rounded angles, and which are about 5½ inches long and an inch at the top. The fruits are a fine orange-yellow when ripe.

76304 to 76307. CUCURBITA spp. Cucurbitaceae.

76304. CUCURBITA MAXIMA Duchesne. Squash.

Large green Spanish. A variety producing medium-sized or even small, very much flattened fruits which are green-skinned and often finely netted, giving them a gray tint. The flesh is bright yellow, very thick, and keeps well.

76305 and 76306. CUCURBITA MOSCHATA Duchesne. Cushaw.

76305. *Brazilian sugar warted.* A medium early variety with long, slender, running stems. The oblong fruits, which keep well, are about 8 inches long and 6 inches in diameter, with five faintly marked ribs and sometimes slightly warted. The flesh is yellow, thick, and very sweet.

76306. *Small China turkscap.* A rather early variety which keeps admirably. The fruits are small, usually not exceeding 2 or 3 pounds in weight, bright red marked with yellow and dark green. The flesh is yellow, firm, floury, and sweet. The crown is not very prominent.

76298 to 76307—Continued.

76307. CUCURBITA PEPO L. Pumpkin.

Long bush Nizza Cougourdon. A long-fruited form of the Nizza Cougourdon S., which in shape is not unlike the Long vegetable marrow.

76308. TILIA OLIVERI Szyszyl. Tiliaceae. Linden.

From Brooklyn, N. Y. Seeds presented by the Brooklyn Botanic Garden. Received March 10, 1928.

A tree 50 feet high, with dark-green orbicular ovate leaves white tomentose beneath, and small globose fruits. The pendulous cymes contain 7 to 20 small white flowers. Native to central China.

76309 and 76310. TRIFOLIUM spp. Fabaceae. Clover.

From east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received March 20, 1928.

76309. TRIFOLIUM sp.

No. 227. *Kenya* clover. Uplands, Kenya Colony, November 15, 1927. A white-flowered creeping clover, almost indistinguishable from *Trifolium repens*, widely and abundantly distributed in the Kenya highlands at altitudes between 5,000 and 9,000 feet. It rarely occurs in pure stands, but always as a mixture or undergrowth with Kikuyu grass, Bermuda grass, or bush. Although acknowledged to be highly palatable and nutritious, it is never cultivated in any way so far as known. It is a much stronger grower in east Africa than *T. repens* which it will usually crowd out, and it withstands frost, but not freezing.

76310. TRIFOLIUM sp.

No. 228. *Creeping red* clover. Uplands, Kenya Colony, November 15, 1927.

For previous introduction and description see No. 75933.

76311 to 76319. AVENA spp. Poaceae. Oats.

From Cowra, New South Wales, Australia. Seeds presented by J. T. Pridham, of the Cowra Experimental Farm, through T. R. Stanton, Bureau of Plant Industry. Received March 20, 1928.

A collection of hybrid oats.

76311. AVENA sp. *Belar.*
76312. AVENA sp. *Bombo.*
76313. AVENA sp. *Buddah.*
76314. AVENA sp. *Budgery.*
76315. AVENA sp. *Kareda.*
76316. AVENA sp. *Kelvin.*
76317. AVENA sp. *Kendall.*
76318. AVENA sp. *Kiah.*
76319. AVENA sp. *Mulga.*

76320. PHASEOLUS COCCINEUS L. Fabaceae. Scarlet Runner bean.

From Algiers, Algeria, North Africa. Seeds presented by Dr. L. Trabut, Government botanist. Received February 24, 1928.

Haricot gieruman.

76321. PHYLLOSTACHYS NEVINII Hance. Poaceae. **Bamboo.**

From McNeill, Miss. Plants and rhizomes presented by H. R. Reed, Bureau of Plant Industry, at the request of R. A. Young, Bureau of Plant Industry. Received March 24, 1928.

A small hardy spreading bamboo up to 7 or 8 feet in height with a culm diameter of five-eighths of an inch. The record of its origin is at present unknown, but it is believed that probably the plant was introduced by the United States Department of Agriculture. The leaves, usually four on a branchlet, are 2 to 3 inches long by five-sixteenths to one-half inch wide, with tessellated venation. The culm sheaths are narrowly but distinctly striped and bear at the base of the pseudophyll a pair of prominent auricles conspicuously fringed with hairs.

76322 to 76326.

From Brignoles, France. Seeds presented by R. Salgues, Director of the Brignoles Botanic Station. Received March 23, 1928.

76322 to 76325. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

76322. B. 116. Forma *Microcarpa*.

76323. B. 117. Forma *Macrocarpa*.

76324. B. 118. *Matheronne de Provence;* a variety of fair quality.

76325. B. 119.

76326. CLEMATIS VITALBA L. Ranunculaceae. **Travelers-joy.**

A handsome strong-growing vine with pinnate-ovate leaflets and axillary and terminal panicles of slightly fragrant white flowers. Native to the Mediterranean region.

76327 to 76329.

From Cali, Colombia. Seeds presented by Rene Hauzeur, Secretaria de Industrias. Received March 16, 1928.

76327. CYPHOMANDRA BETACEA (Cav.) Sendt. Solanaceae. **Tree-tomato.**

A variety grown locally.

76328. RUBUS QUINDEENSIS Hort. Rosaceae.

A variety grown locally.

76329. RUBUS sp. Rosaceae.

A species with reddish fruits, 4 to 5 centimeters long and about 2 centimeters wide, excellent for preserves.

76330. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki.**

From Antibes, Alpes Maritimes, France. Seeds presented by Prof. Georges Poirault, director, Villa Thuret. Received March 16, 1928.

A variety grown locally.

76331. RADICULA ARMORACIA (L.) Robinson. Brassicaceae. **Horseradish.**

From Paris, France. Roots purchased from Cayeux & Le Clerc. Received March 27, 1928.

A variety grown locally.

76332. RADICULA ARMORACIA (L.) Robinson. Brassicaceae. **Horseradish.**

From Lyon, France. Roots purchased from Rivoire Père et Fils. Received March 27, 1928.

A variety grown locally.

76333 to 76353.

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co. Received March 22, 1928.

76333. AGAPANTHUS AFRICANUS (L.) Hoffmannsegg (*Abumon africanum* Britton). Liliaceae. **African lily.**

Variety *Mooreanus*. A reputedly hardy dwarf variety of the African lily with short upright leaves and a scape 18 inches high, bearing an umbel of dark-blue flowers as large as those of the usual form. The leaves seem to be deciduous.

76334 to 76337. ALLIUM spp. Liliaceae. **Onion.**

76334. ALLIUM DECIPIENS Fisch.

An Asiatic bulbous perennial with linear leaves and a long scape bearing a hemispherical umbel of small, white flowers.

76335. ALLIUM KARATAVIENSE Regel.

For previous introduction and description see No. 76206.

76336. ALLIUM ODORUM L.

An onion, native to Europe, cultivated in Japan for its leaves, which are produced abundantly in the spring and eaten as greens.

For previous introduction see No. 73526.

76337. ALLIUM SUBHIRSUTUM L.

A bulbous perennial, native to the Mediterranean region, with hairy-margined narrow leaves a foot high and white flowers.

For previous introduction see No. 59341.

76338 to 76340. BERBERIS spp. Berberidaceae. **Barberry.**

76338. BERBERIS ACUMINATA Franch.

A shrubby evergreen Chinese barberry with yellow branches, lanceolate spiny-margined leaves 4 to 7 inches long, small clusters of brownish yellow flowers, and black fruits.

For previous introduction see No. 65591.

76339. BERBERIS LEVIS Franch.

An evergreen shrub about 5 feet high, native to Yunnan, China. The narrowly linear leaves are closely serrated, and the purplish black fruits have a slight bloom which distinguishes this species from *Berberis atrocarpa*.

For previous introduction see No. 65600.

76340. BERBERIS RUBROSTILLA Chittenden.

A hybrid shrub of garden origin with ovate-spatulate spiny leaves and pendulous clusters of coral-red fruits.

For previous introduction see No. 65602.

76341. CLEMATIS MONTANA RUBENS × VEDRARIENSIS ROSEA. Ranunculaceae.

A hybrid between two climbing Chinese species of clematis, the former a purplish leaved and rosy flowered form of *Clematis montana*, and the latter a rosy flowered form of a hybrid between *C. montana* and *C. chrysocoma*, both of which are normally white flowered.

76342. COTONEASTER FROEBELII Hort. Malaceae.

A hardy shrub of graceful habit with pale-green leaves and scarlet berries.

For previous introduction see No. 73429.

76333 to 76353—Continued.

76343. CYTISUS DALLIMOREI Rolfe. Fabaceae. **Broom.**

This slender shrub, which is a garden hybrid, is 6 to 8 feet high, with trifoliolate leaves. The axillary and terminal clusters of yellow flowers are suffused with pink and have crimson wing petals.

For previous introduction see No. 42552.

76344. DEUTZIA LONGIFOLIA VEITCHII (Veitch) Rehder. Hydrangeaceae.

For previous introduction and description see No. 76248.

76345. HYMENANTHERA CRASSIFOLIA Hook. f. Violaceae.

A dense, half-evergreen New Zealand shrub about 6 feet high, with crowded obovate leaves, small yellowish white or brownish flowers, and small berrylike white fruits.

76346. IRIS HALOPHILA Pall. Iridaceae.

An Asiatic iris of the Spuria group with pale-green leaves a foot long and a stem 2 feet high bearing one or two clusters of yellow flowers with violet veins.

For previous introduction see No. 67036.

76347. LABURNUM ANAGYROIDES ALSCHINGERI (Vis.) C. Schneid. Fabaceae. **Goldenchain.**

A form of the goldenchain with more silky and bluer gray leaves and nearly erect racemes of golden-yellow flowers. Native to southern Europe.

For previous introduction see No. 66961.

76348 to 76350. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

76348. LONICERA ALSEUOSMOIDES Graebn.

A western Chinese half-evergreen twining shrub with narrowly lanceolate leaves and axilliary or terminal panicles of yellowish red flowers and black fruits.

76349. LONICERA DEFLEXICALYX Batal.

For previous introduction and description see No. 76259.

76350. LONICERA sp.

No. 2004 Hers.

76351. MUSCARI HELDREICHII Boiss. Liliaceae. **Grape hyacinth.**

An early flowering bulbous perennial, native to Greece, with linear leaves and elongated heads of amethyst flowers on scapes 4 to 6 inches long.

For previous introduction see No. 67043.

76352. ORNITHOGALUM NARBONENSE L. Liliaceae.

A southern European bulbous perennial with linear leaves and scapes 18 inches high bearing racemes of 20 to 50 erect white flowers striped with green.

76353. SPIRAEA ROSTHORNII Pritz. Rosaceae. **Spirea.**

A graceful western Chinese shrub about 6 feet high, with bright-green incisely serrate leaves and loose corymbs of small white flowers.

76354. CROTALARIA STRIATA DC. Fabaceae.

From Dar es Salaam, Tanganyika, east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received March 27, 1928.

Obtained at the Tanganyika Department of Agriculture, December 8, 1927. This is the most ommon Crotalaria in Tanganyika.

76355. VOANDZEIA SUBTERRANEA (L.) Thouars. Fabaceae.

From Zanzibar, east Africa. Seeds presented by A. C. Barnes, Assistant Director of the Zanzibar Department of Agriculture, through H. F. Roberts, of the University of Manitoba, Winnipeg, Canada. Received March 26, 1928.

Njugu mawe. A creeping annual leguminous plant extensively grown for its edible seeds.

For previous introduction see No. 68972.

76356 to 76362. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Granada, Spain. Plants presented by Juan Leyva, through Austin C. Brady, American consul at Malaga. Received March 31, 1928.

Varieties grown locally.

76356. *Admirable Jaune.*

76357. *Grosse Mignonne.*

76358. *Madeleine de Courson.*

76359. *Malta.*

76360. *Old Newington.*

76361. *Red Magdalen.*

76362. *Yellow Alberge.*

76363 to 76397. CORYLUS spp. Betulaceae.

From Berlin, Germany. Plants purchased from L. Späth. Received March 31, 1928.

76363 to 76396. CORYLUS AVELLANA L. **Filbert.**

76363. *Bandnuss.*

76364. *Barcelonaer Zellernuss.*

76365. *Barrs Zellernuss.*

76366. *Bethes Zellernuss.*

76367. *Eckige Barcelonaer.*

76368. *Einzeln tragende Kegelförmige.*

76369. *Grosse Kugelnuss.*

76370. *Heynicks Zellernuss.*

76371. *Jeeves' Zellernuss.*

76372. *Kadetten Zellernuss.*

76373. *Kunzemüllers Zellernuss.*

76374. *Lange Landsberger.*

76375. *Lange von Downton.*

76376. *Liegels Zellernuss.*

76377. *Ludolphs Zellernuss.*

76378. *Luisens Zellernuss.*

76379. *Mogulnuss.*

76380. *Multiflora.*

76381. *Neue Riesennuss.*

76382. *Prolifique à coque serrée.*

76383. *Römische Nuss.*

76384. *Rote Lambertnuss.*

76385. *Schlesierin.*

76386. *Sicklers Zellernuss.*

76387. *Truchsess Zellernuss.*

76388. *Volkugel.*

76389. *Volle Zellernuss.*

76390. *Webbs Preisnuss.*

76363 to 76397—Continued.

76391. *Weisse Lambertnuss.*

76392. *Wunder von Bollweiler.*

Nos. 76393 to 76396 are varieties cultivated for their ornamental foliage.

76393. *Atripurpurea.*

76394. *Aurea.*

76395. *Laciniata.*

76396. *Urticifolia.*

76397. CORYLUS MAXIMA Mill. **Giant filbert.**

Maxima atropurpurea is a variety cultivated for its ornamental purple leaves.

76398. COUSSAPOA REKOI Standl. Moraceae.

From Concordia, Oaxaca, Mexico. Seeds presented by Emiliu Makrinus. Received March 24, 1928.

A large Mexican tree with a spreading crown and prickly branchlets. The ovate entire leaves are 1 to 2 feet long, and the flowers, in globose pedunculate heads, are followed by succulent edible fruits an inch in diameter.

76399. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Burma, India. Suckers collected by F. G. Krauss, of the University of Hawaii. Received November 18, 1927. Numbered in March, 1928.

A variety grown locally.

76400. PHILADELPHUS sp. Hydrangeaceae. **Mockorange.**

From Mississippi. Cuttings presented by R. N. Lobdell, A. and M. College, through R. A. Young, Bureau of Plant Industry. Received March 27, 1928.

A shrub, originally from the mountains of Tennessee, with an abundance of fragrant flowers. The individual flowers are about the size of a half dollar. This species is said to be superior to *Philadelphus coronaria* and others in the trade.

76401. ECHEVERIA sp. Crassulaceae.

From Caracas, Venezuela. Plant presented by Dr. H. Pittier, Ministerio de Relaciones Exteriores. Received March 21, 1928.

A variety growing locally in the Andes.

76402 and 76403.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received March 26, 1928.

76402. BELOTIA MEXICANA Schum. Tiliaceae.

A handsome Mexican tree up to 75 feet high, with fibrous bark. The serrulate, ovate-oblong leaves are green above and grayish tomentose beneath, the flattened-orbicular fruits small and greenish, and the flowers, appearing in the autumn, are purple.

76403. YUCCA ELEPHANTIPES Regel. Liliaceae.

A Central American tree up to 30 feet high, with several trunks from a swollen base and compactly branched above. The rigidly spreading lanceolate leaves are 3 feet long, and the creamy white flowers are in large panicles. The flowers are cooked and eaten as a vegetable, being fried with eggs. They taste a little like asparagus.

76404 to 76410.

From Echo, Manchuria, China. Seeds presented by A. D. Woeikoff, director of the experimental farm. Received March 29, 1928.

76404 and 76405. PANICUM MILIACEUM L. Poaceae. **Proso.**

Originally from the Cem. Agricultural Experiment Station, Kungchuling, South Manchurian Railway, Mukden Province.

76404. No. 310. A nonglutinous variety.

76405. No. 311. A glutinous variety.

76406 to 76410. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

Nos. 76406 to 76408 were originally from the Commissioner of Industries for Suiyuan district, city of Suiyuan, southern Mongolia.

76406. No. 225. *Northwest black.*

76407. No. 226. *Northwest gold.*

76408. No. 227. *Northwest red.*

Nos. 76409 and 76410 are from Chinese farmers' fields in Ninguta district, Kirin Province.

76409. No. 234. *She-jen* (snake eye).

76410. No. 242. *Ti-chu-mi-tsa.* A broom sorghum.

76411 to 76413. PHOENIX spp. Phoenicaceae.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received March 31, 1928.

76411. PHOENIX PUMILA Hort. **Palm.**

A slender graceful palm, 6 to 10 feet high, with recurved drooping leaves 10 to 16 feet long.

76412. PHOENIX RUPICOLA T. Anders. **Cliff date palm.**

A Himalayan palm with a solitary slender naked stem 15 to 20 feet high, bright-green leaves 10 feet long, and shining yellow oblong fruits.

For previous introduction see No. 75222.

76413. PHOENIX RECLINATA Jacq. **Senegal date palm.**

A tropical and South African palm, 20 to 30 feet high, with reclinate pinnate leaves 6 to 9 feet long, and yellowish fruits half an inch long with a sweetish pulp.

For previous introduction see No. 75223.

76414 and 76415. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Warsaw, Poland. Seeds presented by W. N. Mazaraki, director of the Udycz Co. Received March 31, 1928.

76414. No. 5861-B. 76415. No. 5862-B.

76416 to 76453.

From east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received March, 1928.

76416. BIXA ORELLANA L. Bixaceae. **Anatto tree.**

No. 700. Uganda, November 11, 1927. A common plant found between Kyegegwa and Kampala, where it is often used as a hedge. The berries furnish a coloring matter for butter and cheese.

For previous introduction see No. 51910.

76416 to 76453—Continued.

76417. BRACHIARIA sp. Poaceae. **Grass.**

No. 377. Mile 134, Toto Road, Kyegegwa, Uganda, November 12, 1927. A species of Brachiaria which forms one of the important elements of grazing land and lawns in Uganda. They are excellent hay grasses and endure close grazing. When closely mowed they produce a dense but somewhat coarse turf. All of the Brachiarias are very shy seeders, or at least they produce and shed their seeds over such a long period that it is difficult to harvest them in quantity.

76418. CHAETOCHLOA AUREA (Hochst.) Hitchc. (*Setaria aurea* Hochst.). Poaceae. **Grass.**

No. 373. *Red foxtail.* November 10, 1927. A variety found about 20 miles east of Fort Portal, in the high grassland. It is a good-looking grass, one of the best in Uganda, and it is taller and more leafy than the common *Setaria aurea* of Kenya.

For previous introduction see No. 75304.

76419. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

No. 375. November 8, 1927. One of the many forms of Cynodon found in Uganda. This one, growing on a lawn at the Crater Lakes, 16 miles south of Fort Portal, is an especially fine-leaved form and makes an admirable turf.

76420. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

No. 387. Government Plantation, Kampala, Uganda, November 12, 1927. Grass No. 7. One of a series of nine grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage in Uganda.

76421. DIOSCOREA sp. Dioscoreaceae.

No. 704. November 15, 1927. A vine growing at the edge of the bush near Busia, Uganda.

76422. DISSOTIS sp. Melastomaceae.

Nospei.

76423. DOLICHOS LABLAB L. Fabaceae. **Hyacinth bean.**

No. 691. November 11, 1927. A common vine growing in the grassland and at the edge of the bush between Kyegegwa and Kampala, Uganda.

76424. FICUS sp. Moraceae.

No. 706. November 15, 1927. A shrub growing at the edge of the bush near Busia, Uganda.

76425. HIBISCUS sp. Malvaceae.

No. 715. November 10, 1927. Presented by Mr. Wickham, agricultural officer, Fort Portal, Uganda. The bark of this plant is used by the natives for tying purposes.

76426. HYPARRHENIA sp. Poaceae. **Grass.**

Nos. 206 and 207. November 15, 1927. Scott Agricultural Laboratories, Nairobi, Kenya Colony. A tall but rather leafy grass common in the bush country in the hills. The forage value is unknown. It is indistinguishable from *Hyparrhenia rufa.*

76427. IPOMOEA sp. Convolvulaceae.

No. 714. November 12, 1927. A red-flowered morning-glory from the top of one of the flat hills near Kampala, Uganda.

76416 to 76453—Continued.

76428. MANISURIS EXALTATA (L. f.) Kuntze (*Rottboellia exaltata* L. f.). Poaceae. **Grass.**

No. 389. Government Plantation, Kampala, Uganda, November 12, 1927. Grass No. 9. One of a series of nine grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage in Uganda.

For previous introduction see No. 68967.

76429. MILLETTIA sp. Fabaceae.

No. 378. From the garden of G. C. Ishmael, Kampala, Uganda, November 13, 1927. Next to Jacaranda this species is the most admired flowering shrub in Uganda. The identity appears to be uncertain, and it is unknown whether the plant is indigenous or introduced.

76430. OSBECKIA sp. Melastomaceae.

No. 641. Kenya Colony, November 3, 1927. A small ornamental shrub with large purple flowers, found along the stream about 13 miles beyond Kitale.

76431. PANICUM MAXIMUM Jacq. Poaceae. **Grass.**

No. 385. Government Plantation, Kampala, Uganda, November 12, 1927. Grass No. 5. One of a series of nine grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage in Uganda.

For previous introduction see No. 74464.

76432. PASPALUM CONJUGATUM Berg. Poaceae. **Grass.**

No. 381. *Omudo.* Government Plantation, Kampala, Uganda, November 12, 1927. Grass No. 1. One of a series of nine grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage in Uganda.

For previous introduction see No. 67722.

76433. PASPALUM NOTATUM Fluegge. Poaceae. **Grass.**

No. 380. Near Kampala, Uganda, November 12, 1927. A locally grown variety considered the best grass for lowland pasture in Uganda. It is the only grass in Uganda that appears to be cultivated for grazing by the natives.

For previous introduction see No. 67979.

76434 to 76436. PASPALUM spp. Poaceae. **Grass.**

Government Plantation, Kampala, Uganda, November 12, 1927. Grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage in Uganda.

76434. PASPALUM sp.

No. 382. Grass No. 2.

76435. PASPALUM SCROBICULATUM L.

No. 383. Grass No. 3.

76436. PASPALUM SCROBICULATUM L.

No. 384. Grass No. 4.

76437 to 76440. PENNISETUM spp. Poaceae. **Grass.**

76437. PENNISETUM sp.

No. 370. *Little Tororo* grass. November 4, 1927. A grass of good forage appearance growing along the road east of Tororo, Uganda. This species is not believed to have been seen elsewhere.

76416 to 76453—Continued.

76438. PENNISETUM sp.

No. 371. *Big Tororo* grass. November 4, 1927. A grass similar to No. 370 [No. 76437], but with much larger heads. It was found along the road east and west of Tororo, Uganda.

76439. PENNISETUM sp.

No. 374. November 10, 1927. A tall bunch grass, 5 to 7 feet high, growing among elephant grass along the road near the Crater Lakes, south of Fort Portal, Uganda. It is one of the few grasses which appear to hold their own in the rank elephant grass covering the lower slopes and foothills of Ruwenzori.

76440. PENNISETUM sp.

No. 391. November 19, 1927. Presented by W. L. Watt, superintendent, Scott Agricultural Laboratories, Nairobi, Kenya Colony. It appears to be the "Pennisetum with witch-broom tufts," common in moist places all over the East African plains.

76441. PHASEOLUS SEMIERECTUS L. Fabaceae.

No. 600. November 8, 1927. A common legume growing in the grassland at Kyegegwa, Uganda. The flowers are large and purple, and the brown hairy pods are long and slender.

For previous introduction see No. 61008.

76442. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 379. November 12, 1927. Presented by G. O. Ishmael, Kampala. An edible pink-flowered pea said to be indigenous in southwestern Uganda, and the only good-flowered pea that does well in Uganda. When cooked the peas are darker colored than English garden peas, but they are quite as palatable.

76443. RUBUS sp. Rosaceae.

No. 661. November 9, 1927. A variety growing locally in the forest and at the edge of the bamboo zone on Ruwenzori Range, near Buwanda Pass.

76444. TRICHOLAENA ROSEA Nees. Poaceae. **Natal grass.**

No. 388. Government Plantation, Kampala, Uganda, November 12, 1927. Grass No. 8. One of the series of nine grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage in Uganda.

For previous introduction see No. 73262.

76445 to 76447. TRIFOLIUM spp. Fabaceae. **Clover.**

76416 to 76453—Continued.

76445. TRIFOLIUM sp.

No. 368. November, 1927. Near Timboroa, Kenya Colony, at an altitude of 9,000 feet on the Eldoret Road, en route to Uganda. A pointed-leaved, white-flowered creeping clover growing in natural sward in deep-red "coffee" soil. It is believed that this species had not been collected elsewhere, though the identity is uncertain.

76446. TRIFOLIUM sp.

No. 369. November, 1927. Near Timboroa, Kenya Colony, at an altitude of 9,000 feet, on the Eldoret Road, en route to Uganda. A fine grazing type of clover with large violet, magenta, or deep-red flowers growing in natural sod. It is a promising clover for cool moist regions.

76447. TRIFOLIUM sp.

No. 372. November 9, 1927. A clover with small red flowers, found at the foot of Buwanda Pass, Ruwenzori Range, Uganda. This is the only clover found on Ruwenzori Range or known to occur there.

76448. VIGNA sp. Fabaceae.

No. 392. November, 1927. A not-uncommon vine in Kenya Colony, said to be of potential usefulness for forage or green manure. It grew voluntarily at the Scott Agricultural Laboratories, Nairobi, Kenya Colony. The plant from which these seeds were taken was very leafy and luxuriant.

76449. LEONOTIS NEPETAEFOLIA (L.) Ait. Menthaceae.

No. 393. Nakuru, Kenya Colony. November 1, 1927. A herbaceous orange-flowered perennial resembling monarda, found throughout east Africa and at an altitude of 10,000 feet on Mount Kenya where it becomes 12 feet high. It has been introduced into England as an ornamental. Several forms occur with flowers varying from light pink through rather deep red to bright orange. The latter color predominates.

76450. (Undetermined.)

No. 633. November 1, 1927. A tree growing near a small stream between Gilgil and Nakuru, Kenya Colony.

76451. (Undetermined.)

No. 692. November 11, 1927. A legume common on grassland and hills between Kyegegwa and Kampala, Uganda.

76452. (Undetermined.)

No. 696. November 11, 1927. A shrublike honeysuckle found between Kyegegwa and Kampala, Uganda.

76453. (Undetermined.)

No. 702. November 13, 1927. A low tree growing in a garden at Kampala, Uganda.

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December 19, 1929

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Bureau of Plant Industry	WILLIAM A. TAYLOR, *Chief.*
Office of Foreign Plant Introduction	KNOWLES A. RYERSON, *Principal Horticulturist, in Charge.*

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 95

Washington, D. C. ▼ Issued February, 1930

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1928 (NOS. 76454 TO 77260)

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INTRODUCTORY STATEMENT

The period covered by Inventory 95—April, May, and June, 1928—was the busy time for planting in our Northern Hemisphere. But the material received is a reminder that the Southern Hemisphere is just as busy harvesting crops. Two collections of Tasmanian and Australian plants obtained by Mrs. Frieda Cobb Blanchard (Nos. 76701 to 76724, 76931 to 76967) will be of interest to plant growers in the Southwestern States, as will the collection from New Zealand (Nos. 77173 to 77214). Thirty varieties of common wheat (*Triticum aestivum*, Nos. 76968 to 76997) from New South Wales, Australia, will be of interest to cerealists, and a collection, mostly succulents (Nos. 77217 to 77252) from Kirstenbosch, Cape Province, Africa, will add to the possibilities for rock gardens in the warmer parts of the country. Eight kinds of grasses from Argentina (Nos. 76878 to 76885), of possible value as forage crops, increase the receipts from the antipodes.

In line with the policy of adding to the ornamental plants already in cultivation in this country, new or little known species and varieties of Abelia, Berberis, Buxus, Deutzia, Lonicera, Syringa, and other genera have been obtained from Hon. Vicary Gibbs, of England (Nos. 76550 to 76602). A collection of Japanese azaleas, mostly horticultural forms (*Rhododendron* spp., Nos. 77064 to 77146), collected by R. K. Beattie, will add to this list of ornamentals as well as supply materials for breeding new varieties suited to American conditions.

Mr. Beattie also sent in some Japanese chestnuts (*Castanea crenata*, Nos. 76473 and 76474), several Japanese oaks (*Quercus* spp., Nos. 76478 to 76481), and a new strawberry (*Fragaria hayatai*, No. 76499) which may possess some new characteristics of value to breeders.

To the already large collection of bamboos being cultivated at the Barbour Lathrop Plant-Introduction Garden at Savannah, Ga., this inventory adds 15 varieties (Nos. 77000 to 77014) collected by F. A. McClure in China and 8 varieties (Nos. 77253 to 77260) from France.

Thirty-two varieties of filberts (*Corylus avellana*, Nos. 76821 to 76852) from Germany; a collection of new varieties of apples (*Malus* spp., Nos. 76454 to 76462) and pears (*Pyrus* spp., Nos. 76463 to 76465), and 23 varieties of red clover (*Trifolium pratense*, Nos. 76650 to 76672) from Russia; 39 cereals and forage crops from the Caucasus (Nos. 76500 to 76538); sugarcane varieties and closely related species (*Saccharum* spp., Nos. 76539 to 76549) from India; and 20 varieties of oats (*Avena sativa*, Nos. 76800 to 76819) from Manchuria, show that the Northern Hemisphere was not entirely dormant during this period.

86851—30——1

It should be noted again that this inventory does not represent material now in the Office of Foreign Plant Introduction. Much of it has been turned over to other offices, and some of it, at least, will be removed from propagation until it has been tested to determine its value in this country.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION
Washington, D. C., June 24, 1929.

INVENTORY[1]

76454 to 76465.

From Leningrad, Russia. Scions presented by A. Kol, chief of the bureau of introduction, Institute of Applied Botany. Received May 25, 1928.

New varieties originated by I. V. Mitchurin, Kozlov, Tambov Government.

76454 to 76462. MALUS spp. Malaceae. **Apple.**

76454. MALUS sp.

No. 82147. *Anton Shapau.* A good-keeping winter variety. The bright-red fruits, 6 to 7 centimeters in diameter, are of good flavor.

76455. MALUS sp.

No. 82144. *Bellefleure Kitaika.* (*American Bellefleure* × *Malus prunifolia.*) 1914. A fall variety. The fruits, bright red on a yellow ground, are 8 to 9 centimeters in diameter and of excellent flavor.

76456. MALUS sp.

No. 82146. *Bessemianka Mitchurina.* (*Skrizhapel* × *Komsinskaia.*) 1921. A good-keeping, unusually hardy winter variety. The fruits, 8 centimeters in diameter, are yellow with a red blush.

76457. MALUS sp.

No. 82149. *Bergamot Renet.* Seedling of *Antonovka* grafted on a pear. 1898. A good-keeping winter variety. The greenish yellow fruits are 8 centimeters in diameter and of good flavor.

76458. MALUS sp.

No. 82145. *Shampan-ren-Kitaika.* (*Malus prunifolia* × *White Winter Calville.*) 1920. A good-keeping winter variety. The yellow fruits are 7 centimeters in diameter and have a pleasant flavor.

76459. MALUS sp.

No. 82148. *Pepin Shafrannyj.* (*Renet d'Orleans English Pepin* × *Malus prunifolia.*) 1915. A good-keeping winter variety. The bright-colored fruits are 6 to 7 centimeters in diameter and of good flavor.

76454 to 76465—Continued.

76460. MALUS sp.

No. 82143. *Krasnyj Shtandart.* (*Renet d'Orleans* × *English Pepin* × *Pyrus prunifolia* × *Pyrus nedzwetskiana* ×.) 1922. A good-keeping winter variety, not entirely hardy in the Moscow Government. The fruits are bright red and of good flavor. This variety is of ornamental value because of its dark-red foliage.

76461. MALUS sp.

No. 82150. *Slavianka.* (*Antonovka* × *Renet ananasnyj.*) 1896. A good-keeping winter variety. The yellow fruits are 7 centimeters in diameter and of excellent flavor.

76462. MALUS sp.

No. 82152. *Bergamotte Surrogat Sakhara.* (*Tzarskaia* × *Aydego.*) 1915. A summer variety. The fruits, yellow with a red blush, are 6 to 7 centimeters in diameter and of good flavor.

76463 to 76465. PYRUS spp. Malaceae. **Pear.**

76463. PYRUS sp.

No. 82151. *Kitaika Zolotaia.* (*Belyj Naliv* × *Pyrus prunifolia.*) 1907. An unusually hardy summer variety. The fruits are 6 centimeters in diameter and of good flavor.

76464. PYRUS sp.

No. 82154. *Winter Ber.* (*Pyrus ussuriensis* × *Ber d'Ill.*) 1898. A good-keeping winter variety. The yellow fruits are 8 centimeters in diameter. The flavor is exceedingly changeable, depending on the stock used.

76465. PYRUS sp.

No. 82153. *Ber Pobeda.* (*Tzarskaia* × *Sen Germaine.*) 1916. A good-keeping winter variety. The fruits, yellow with a red blush, are 6 to 7 centimeters in diameter and of good flavor.

76466. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From Svalof, Sweden. Seeds presented by Allmanna Svenska, through Morgan W. Evans, Bureau of Plant Industry. Received June 5, 1928.

Svalof Original Gloria.

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in, so that definite identification can be made.

76467 and 76468. INGA spp. Mimosaceae.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received August 17, 1927. Numbered June, 1928.

76467. INGA JINICUIL Schlecht.

An unarmed tropical leguminous tree, sometimes becoming large, with pinnate bright-green leaves, white flowers, and rather large pods containing edible pulp. Native to southeastern Mexico.

76468. INGA sp.

Some of the plants grown from seeds received as *Inga jinicuil* have developed leaves with winged petioles, which is not characteristic of that species. They have been sorted out to be grown for further identification.

76469. ULMUS JAPONICA Sarg. Ulmaceae. **Japanese elm.**

From the Arnold Arboretum, Jamaica Plain, Mass. Seeds collected by C. C. Thomas, Bureau of Plant Industry. Received June 5, 1928.

A handsome, hardy Japanese elm, occasionally 90 feet high.

For previous introduction see No. 64467.

76470. ULMUS PUMILA L. Ulmaceae. **Chinese elm.**

From Chosen. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received June 7, 1928.

No. 684. Arboretum at the Suigen Agricultural Experiment Station. May 15, 1928.

For previous introduction see No. 74203.

76471. DENDROCALAMUS sp. Poaceae. **Bamboo.**

From Oneco, Fla. Plants purchased from Reasoner Bros., Royal Palm Nurseries, through R. A. Young, Bureau of Plant Industry. Received March 12, 1928. Numbered June, 1928.

An unidentified bamboo which was found growing with *Dendrocalamus strictus* and which somewhat resembles that species.

76472. LITCHI CHINENSIS Sonner (*Nephelium litchi* Cambess.). Sapindaceae. **Lychee.**

From Manila, Philippine Islands. Plants presented by Arthur F. Fischer, Director of the Bureau of Forestry, through W. T. Swingle, Bureau of Plant Industry. Received May 7, 1928.

A tropical Chinese tree 30 to 40 feet high with a broad round-topped crown, usually three pairs of glossy green leaflets 5 inches long, and small clusters of pink fruits which turn brown in ripening. The edible portion is the fleshy arillus surrounding the seed.

For previous introduction see No. 74220.

76473 and 76474. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Sakauwe Mura, Kuga Gun, Yamaguchi Ken, Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received March 28, 1928. Numbered June, 1928.

Cultivated varieties obtained from Mr. Shigeo Hayashi.

76473. No. 676. *Yokobai.*

76474. No. 677. *Ganne.*

76475 to 76481.

From Japan. Seeds and plants collected by R. K. Beattie, Bureau of Plant Industry. Received December, 1927, and February, 1928. Numbered June, 1928.

76475 to 76477. CHRYSANTHEMUM MORIFOLIUM (Ramat.) Hemsl. Asteraceae.

Plants from the Botanic Garden, Kyoto, January 28, 1928.

76475. No. 609. *Yu bae.* Hosokuda type (slender pipe).

A light reddish purple chrysanthemum.

76476. No. 610. *Ryukan.* Kankuda type (intermediate pipe).

A light brownish purple.

76477. No. 611. *Itozakura.* Harikuda type (needle pipe).

A cherry-colored chrysanthemum.

76478 to 76481. QUERCUS spp. Fagaceae. **Oak.**

76478. QUERCUS MONGOLICA GROSSESERRATA (Blume) Rehd. and Wils.

No. 14. Seeds. Makomanai Experimental Farm, near Sapporo, Hokkaido. October 10, 1927. *Mizunara.* This oak is said to be the most important forest tree in Japan, attaining a height of 100 feet and a girth of 12 feet. The wood is durable and for a hardwood is easily worked, approximating for furniture the best European and American oaks.

76479. QUERCUS sp.

No. 177. Seeds. A wild species growing in the garden of the Hachiman Shrine, at Oji, Shino Mura, Minamikuwata Gun, Tamba, November 2, 1927.

76480. QUERCUS sp.

No. 178. Seeds. *Kunugi.* A wild species growing at Oji, Shino Mura, Minamikuwata Gun, Tamba, November 2, 1927.

76481. QUERCUS sp.

No. 260. Seeds. A cultivated species growing at Mori, Shino Mura, Minamikuwata Gun, Tamba, November 15, 1927.

76482 and 76483. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Giza, Egypt. Seeds presented by the director of the horticultural section of the Ministry of Agriculture. Received June 8, 1928.

76482. A long white variety.

76483. A long black variety.

76484 and 76485.

From Chile. Seeds presented by E. O. Orpet, Superintendent of Parks, Santa Barbara, Calif. Received June 11, 1928.

76484. GEVUINA AVELLANA Molina. Proteaceae. **Chilean nut.**

An evergreen Chilean tree up to 40 feet high, with dark-green pinnate leaves, white flowers in axillary racemes, and edible red fruits.

For previous introduction see No. 44409.

76485. PUYA ALPESTRIS (Poepp. and Endl.) Gay. Bromeliaceae.

A Chilean herbaceous perennial with pineapplelike leaves and a flower stalk 3 to 4 feet high bearing a much branched panicle of large showy metallic blue flowers. It is said to stand considerable frost.

76486 and 76487. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From Tihama Desert, Yemen, Arabia. Seeds obtained through K. S. Twitchell. Received June 14, 1928.

76486. A white variety.

76487. A red variety.

76488. BIGNONIA MAGNIFICA Bull. Bignoniaceae.

From Peradeniya, Ceylon. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 19, 1926. Numbered June, 1928.

No. 883. Botanic gardens, June 9, 1926. A vigorous climbing vine with attractive deep-green foliage which is not attacked by fungi or other pests to any extent. The large trumpet-shaped flowers are deep lake pink inclined toward magenta. A large bush of this variety is growing in the Peradeniya Botanic Gardens.

76489 and 76490.

From Sao Paulo, Brazil. Seeds presented by Amadeu Barbiellini. Received June 9, 1928.

76489. CACARA EROSA (L.) Kuntze (*Pachyrhizus angulatus* Rich.). Fabaceae. **Yam bean.**

Jacatupe. A twining wiry-stemmed plant occasionally grown in the West Indies. The large tuberous roots contain much starch.

For previous introduction see No. 51364.

76490. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

Guandu. A Brazilian variety.

76491 and 76492.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received June 11, 1928.

76491. PHYLLANTHUS ACIDUS (L.) Skeels (*P. distichus* Muell. Arg.). Euphorbiaceae. **Iba.**

A variety with sweet white fruits almost an inch in diameter.

For previous introduction see No. 48179.

76492. VIBURNUM sp. Caprifoliaceae.

Idog.

76493 to 76495. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Honolulu, Hawaii. Seeds presented by W. T. Pope, horticulturist of the Hawaii Agricultural Experiment Station. Received June 12, 1928.

Hawaiian varieties.

76493. A long variety.

76494. A round variety.

76495. *Solo.*

For previous introduction see No. 52620.

76496. DENDROCALAMUS LATIFLORUS Munro. Poaceae. **Bamboo.**

From Oneco, Fla. Plants purchased from Reasoner Bros., Royal Palm Nurseries, through R. A. Young, Bureau of Plant Industry. Received March 12, 1928. Numbered May, 1928.

A native of the warmer portions of China, said to have been found near Hong Kong and vicinity. Grows to a height of 60 to 75 feet; has strong culms often 5 inches in diameter; leaves are often 7 to 10 inches long and from one-half inch to 3 inches broad. A very handsome ornamental species worthy of planting in the southern half of Florida.

76497. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Ventimiglia, Italy. Seeds presented by S. McLeod Braggins, superintendent, La Mortola. Received June 18, 1928.

An Italian variety.

76498. ZEPHYRANTHES sp. Amaryllidaceae. **Zephyrlily.**

From Piste, Yucatan, Mexico. Bulbs collected by E. L. Crandall, Bureau of Plant Industry. Received June 28, 1927. Numbered June, 1928.

A tender bulbous white-flowered plant.

76499. FRAGARIA HAYATAI Makino. Rosaceae. **Strawberry.**

From Mount Arisan, Taiwan. Plants collected by R. K. Beattie, Bureau of Plant Industry. Received May 1, 1928.

No. 681. Growing on loose soil at the foot of a cliff near Hiranonuma station, March 26, 1928. A Japanese stoloniferous perennial with long-petioled radicle leaves of three rhombic-ovate leaflets serrate with the terminal tooth smaller than the others. The flowers have a light-green calyx and obovate emarginate or cuspidate white petals, and the delicious globose red fruits are one-fourth of an inch in diameter.

76500 to 76538.

From Daghestan, Caucasus. Seeds presented by A. Weissmann, Director of the Daghestan Agricultural Plant-Breeding Station at Derbent. Received April 21, 1928.

76500. CICER ARIETINUM L. Fabaceae. **Chickpea.**

No. 171. Originally from Derbent.

76501 to 76504. HORDEUM VULGARE NIGRUM (Willd.) Beaven. **Six-rowed barley.**

76501. No. 3741.

76502. No. 3953. Originally from Bereekey village, Derbent district, Daghestan.

76503. No. 3955. Originally from Derbent district, Daghestan.

76504. No. 4141. Originally from Transcaucasia, Nakhichevan district.

76505 to 76514. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

76505. No. 2565. Originally from Kizliar district, Daghestan.

76506. No. 2677. Originally from Petroff's farm, Ingooshetia, Northern Caucasus.

76507. No. 2679. Originally from Chechnia, Terek region, Low Naur village, Northern Caucasus.

76508. No. 2689. Originally from Terek district, Northern Caucasus.

76509. No. 2691. Originally from Little Kabarda, Tambovsky farm.

76510. No. 3759. Originally from Kasoom, Kent village, Kiurinsk district, Daghestan.

76511. No. 3817. Originally from Kaytago, Tabassaran district, Daghestan.

76512. No. 3973. Originally from Derbent district, Daghestan.

76513. No. 4119. Originally from Transcaucasia, Nakhichevan district.

76514. No. 4133.

76515. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

No. 267.

76500 to 76538—Continued.

76516 and 76517. PISUM SATIVUM L. Fabaceae. **Pea.**

76516. No. 39. Darghin district.

76517. No. 52. Laki district.

76518. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.) Fabaceae. **Soybean.**

No. 308. Originally from Khassar Yook.

76519 to 76529. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

76519 to 76525. Variety *erythrospermum*.

76519. No. 1682. Originally from Andi district, Daghestan.

76520. No. 1879. Originally from Kaytago, Tabassaran district, Daghestan.

76521. No. 2033. Originally from Makach Kala district, Dahgestan.

76522. No. 2121. Originally from Samoor district, Daghestan.

76523. No. 2126. Originally from Samoor district, Daghestan.

76524. No. 2250. Originally from Avary district, Daghestan.

76525. No. 2438. Originally from Ossetia district, Daghestan.

76526. No. 3250. Originally from Kaytago Tabassaran district, Daghestan. Variety *ferrugineum*.

76527. No. 3552. Originally from Buynaksky district, Daghestan. Variety *ferrugineum*.

76528. No. 3609. Originally from Avary district, Daghestan. Variety *ferrugineum*.

76529. No. 5962. Originally from Laksky district, Daghestan. Variety *fuliginosum*.

76530 to 76535. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

76530. No. 3085. Originally from Kaytago Tabassaran district, Daghestan. Variety *hordeiforme*.

76531. No. 3484. Originally from Kaytago Tabassaran district, Daghestan. Variety *hordeiforme*.

76532. No. 3913. Originally from Derbent district, Daghestan. Variety *hordeiforme*.

76533. No. 3937. Originally from Derbent district, Daghestan. Variety *murciense*.

76534. No. 4182. Originally from Kaytago Tabassaran district, Daghestan. Variety *coerulescens*.

76535. No. 4353. Originally from Kaytago Tabassaran district, Daghestan. Variety *coerulescens*.

76536 to 76538. VICIA spp. Fabaceae.

76536. VICIA ERVILIA (L.) Willd. **Vetch.**

No. 235. A wild variety originally from Samoor district, Daghestan.

76537. VICIA FABA L. **Broadbean.**

No. 180. Originally from Avary district.

76538. VICIA SATIVA L. **Common vetch.**

No. 229.

76539 to 76549. SACCHARUM spp. Poaceae.

From Coimbatore, India. Cuttings presented by T. S. Venkatraman, Government sugarcane expert of the Imperial Sugarcane Station at Coimbatore. Received April 23, 1928.

76539 to 76549—Continued.

76539. SACCHARUM ARUNDINACEUM Retz. **Grass.**

A tall grass, native to India and China, closely related to sugarcane.

For previous introduction see No. 55667.

76540. SACCHARUM MUNJA Roxb. **Grass.**

Sarhandar. An Indian perennial grass with stems 20 feet high, lanceolate leaves 5 feet long, and ovoid panicles 1 to 2 feet long.

76541. SACCHARUM NARENGA (Nees) Wall. **Grass.**

A perennial Indian grass with slender stems 8 feet high, linear leaves a foot long, and narrow panicles a foot long.

76542 to 76546. SACCHARUM OFFICINARUM L. **Sugarcane.**

Indian varieties.

76542. *Chunnee*. A variety of the *Saretha* group.

76543. *Hemja*.

76544. A variety of the *Nagori* group.

76545. *Dhaulu*. A variety of the *Sunnabile* group.

76546. *Uba*. A variety of the *Pansahi* group.

76547 to 76549. SACCHARUM SPONTANEUM L. **Grass.**

For previous introduction see No. 73997.

76547. *Dacca*.

76548. *Gehra Bon*.

76549. A local variety.

76550 to 76602.

From Elstree, Herts, England. Plants presented by Hon. Vicary Gibbs, Aldenham House Gardens. Received April 13, 1928.

76550 to 76552. ABELIA spp. Caprifoliaceae.

76550. ABELIA CHINENSIS R. Br.

A spreading Chinese shrub 4 to 5 feet high, with reddish branchlets, ovate serrate leaves 2 to 3 inches long, and fragrant white flowers in dense axillary and terminal cymes.

76551. ABELIA SERRATA Sieb. and Zucc.

A Japanese shrub about 5 feet high, with rhombic-ovate leaves an inch long and axillary pairs of rosy pink flowers.

For previous introduction see No. 73401.

76552. ABELIA TRIFLORA R. Br.

A Himalayan shrub up to 15 feet high, with corrugated bark, ovate-lanceolate leaves 2 to 3 inches long, and terminal clusters of fragrant rosy white flowers.

For previous introduction see No. 73402.

76553. ARTEMISIA INCANA (L.) Druce. Asteraceae.

A shrubby perennial, native to Armenia and Persia, with intensely gray orbicular leaves palmately divided into linear lobes and small gray flower heads.

For previous introduction see No. 73404.

76554 to 76556. BERBERIS spp. Berberidaceae. **Barberry.**

76554. BERBERIS ACTINACANTHA Mart.

An evergreen Chilean shrub 3 to 4 feet high, with 3-parted to 5-parted often leaflike spines, broadly ovate spiny margined leaves, fascicles of three to six fragrant deep-yellow flowers, and dark fruits.

For previous introduction see No. 65222.

76550 to 76602—Continued.

76555. BERBERIS ANGULOSA Wall.

A handsome Himalayan shrub 4 to 5 feet high, with 1-parted to 5-parted spines, obovate spiny leaves whitish beneath, large solitary globose orange-yellow flowers half an inch wide, and ellipsoid red fruits.

For previous introduction see No. 65223.

76556. BERBERIS BREVIPANICULATA C. Schneid. **Shortcluster barberry.**

A tawny branched shrub, native to western China, with golden-yellow spines, glaucous oblong leaves, and small flowers in graceful panicles an inch long.

For previous introduction see No. 52336.

76557 to 76560. BUXUS spp. Buxaceae.

76557. BUXUS BALEARICA Willd. **Balearian box.**

An evergreen shrub, 10 to 15 feet high, native to the Balearic Islands, with oblong light-green leaves 1 to 2 inches long and more than half an inch wide.

76558. BUXUS HARLANDII Hance.

A compact evergreen Chinese shrub about 3 feet high, with obovate-oblong leaves gradually narrowed toward the base, less than an inch long and a fourth of an inch broad.

For previous introduction see No. 40566.

76559. BUXUS SEMPERVIRENS L. **Box.**

Variety *myosotifolia*. A form of the common box which probably has oblanceolate leaves like the forget-me-not.

76560. BUXUS SEMPERVIRENS MYRTIFOLIA Sweet. **Box.**

A form of the common box which is usually low and has small elliptic-oblong leaves.

76561. CARMICHAELIA ARBOREA (Forst. f.) Druce (*C. australis* R. Br.). Fabaceae.

A leafless New Zealand shrub 6 to 9 feet high, with flat green branches and thick clusters of fragrant delicate lilac flowers with darker stripes. The valves of the black pods fall away, exposing the bright-scarlet seeds.

For previous introduction see No. 76220.

76562. CARMICHAELIA FLAGELLIFORMIS Colenso. Fabaceae.

A New Zealand shrub about 4 feet high, with stiff slender flat green branches, which take the place of leaves, and short dense axillary fascicles of purplish flowers borne in great profusion.

For previous introduction see No. 40159.

76563. CASSINIA FULVIDA Hook. f. Asteraceae.

A New Zealand shrub 4 to 5 feet high, covered with slightly viscid yellow down and producing corymbs of small white flowers.

For previous introduction see No. 73408.

76564. CASSINIA VAUVILLIERSII (Homb. and Jacq.) Hook. f. Asteraceae.

A compact New Zealand shrub 2 to 8 feet high covered with yellow tomentum and having small leathery leaves half an inch long. The heads of small white flowers are in dense terminal corymbs.

For previous introduction see No. 73410.

76565. CEANOTHUS DELILIANUS Spach (*C. azureus* Hort.). Rhamnaceae.

Georges Simon. A hybrid shrub with dark-green leaves and lilac-rose flowers.

For previous introduction see No. 73412.

76550 to 76602—Continued.

76566. CERATOSTIGMA GRIFFITHII C. B. Clarke. Plumbaginaceae.

A low densely branched Himalayan shrub with alternate lanceolate red-margined leaves and heads of handsome blue flowers.

For previous introduction see No. 73415.

76567. CISTUS PURPUREUS Lam. Cistaceae. **Rockrose.**

A hybrid shrub 3 to 4 feet high, with villous branchlets, oblong-lanceolate leaves, and terminal cymes of large reddish purple flowers with a red blotch on a yellow ground at the base of each petal.

For previous introduction see No. 73419.

76568. CLEMATIS GLOBULOSA Hort. Ranunculaceae.

A hybrid of *Clematis douglasii scottii* and *C. texensis* with deep-purple inverted pitcher-shaped flowers. Both of the parents of this European hybrid are native to the western United States.

For previous introduction see No. 76110.

76569. COPROSMA ACEROSA A. Cunn. Rubiaceae.

An evergreen prostrate New Zealand shrub with very small linear leaves, greenish white flowers, and pale-blue berries.

For previous introduction see No. 73425.

76570. CORIARIA TERMINALIS XANTHOCARPA Rehd. and Wils. Coriariaceae.

A semishrubby Himalayan perennial with sessile ovate leaves and terminal racemes of greenish flowers followed by long, very ornamental clusters of translucent yellow berries.

For previous introduction see No. 73534.

76571. COTONEASTER ACUMINATA Lindl. Malaceae.

Forrest No. 5567. A variety of *Cotoneaster acuminata*, which is a Himalayan shrub 12 to 15 feet high with ovate leaves, pinkish flowers, and bright-red fruits.

For previous introduction see No. 49627.

76572. COTONEASTER FRIGIDA Wall. Malaceae.

Variety *Vicarii*. Said to be a magnificent form of this Himalayan tree with large masses of bright-red berries.

76573. DAVIDIA INVOLUCRATA VILMORINIANA (Dode) Hemsl. (*D. laeta* Dode). Cornaceae. **Dovetree.**

A Chinese pyramidal tree with cordate serrate yellowish green leaves and small flower heads each with two large unequal creamy white bracts, the longer one pendulous and 6 inches long. The pear-shaped fruits, 1 to 2 inches long, are green with a purple bloom.

For previous introduction see No. 72797.

76574 to 76576. DEUTZIA spp. Hydrangeaceae.

76574. DEUTZIA LONGIFOLIA VEITCHII (Veitch) Rehder.

A Chinese shrub 6 feet high, with lanceolate leaves which are stellate pubescent beneath and dense corymbs of brightly colored purplish flowers an inch across.

For previous introduction see No. 76248.

76575. DEUTZIA SCABRA Thunb. **Fuzzy deutzia.**

Variety *latiflora*. A form of this commonly cultivated Chinese shrub which is said to have large panicles of large white flowers with pink-tinted outside petals.

76550 to 76602—Continued.

76576. DEUTZIA SETCHUENENSIS Franch. **Szechwan deutzia.**

A Chinese shrub 6 feet high with lanceolate long-pointed leaves and loose corymbs of white flowers.

For previous introduction see No. 73434.

76577. EUONYMUS sp. Celastraceae.

Vilmorin No. 5521. A tall pyramidal free-flowering evergreen Chinese shrub probably related to *Euonymus japonicus*.

76578. FAGELIA VIOLACEA (Cav.) Kuntze (*Calceolaria violacea* Cav.). Scrophulariaceae.

An evergreen Chilean shrub with small heart-shaped deeply toothed leaves and yellow-salmon flowers spotted with purple.

For previous introduction see No. 73407.

76579. FORSYTHIA INTERMEDIA DENSIFLORA Koehne. Oleaceae. **Goldenbell.**

A form of this garden hybrid forsythia which has the pale yellow flowers densely crowded on the pendulous shoots.

76580. HYPERICUM KOUYTCHENSE Leveille. Hypericaceae.

Wilson No. 256. A Chinese shrub which forms a rounded hummock profusely covered with golden-yellow flowers.

76581. JASMINUM HETEROPHYLLUM Roxb. Oleaceae. **Jasmine.**

Variety *glabricymosum*. A smooth-flowered form of this Himalayan shrub which is said to be native to China and is a strong-growing bush with a profusion of golden-yellow flowers.

76582 to 76588. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

76582. LONICERA CHAETOCARPA Rehder.

An upright shrub about 6 feet high, native to western China, with oblong leaves, nodding yellowish flowers, and red fruits.

76583. LONICERA KOEHNEANA Rehder.

A Chinese shrub up to 12 feet high, with rhombic-ovate leaves softly pubescent beneath, yellow flowers, and dark-red fruits.

For previous introduction see No. 65772.

76584. LONICERA PILEATA YUNNANENSIS (Franch.) Rehder.

A prostrate half-evergreen shrub, native to Yunnan, China, with ovate leaves, yellow flowers, and violet fruits.

For previous introduction see No. 73441.

76585. LONICERA SPINOSA Jacquemont.

A low Himalayan shrub with spinescent branchlets, linear oblong leaves an inch long, purplish flowers, and bluish red fruits.

76586. LONICERA TRAGOPHYLLA Hemsl.

A high climbing woody vine, native to western China, with oblong leaves 4 to 5 inches long, terminal clusters of large bright-yellow flowers 3 inches long, and bright-red fruits.

76587 and 76588. LONICERA spp.

New and excellent bush honeysuckles of good fruiting habits.

76587. LONICERA sp.

Hers No. 2037.

76588. LONICERA sp.

Cooper No. 5626.

76550 to 76602—Continued.

76589. MALUS MAGDEBURGENSIS Zimmerm. Malaceae. **Apple.**

A German hybrid apple forming a small tree with ovate leaves pubescent beneath, semidouble pinkish flowers, and yellow fruits an inch in diameter.

For previous introduction see No. 56522.

76590. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae.

Variety *Aldenham purple*. A new and vigorous hybrid apple with dark purplish red fruits of good size.

76591. ONONIS ROTUNDIFOLIA L. Fabaceae.

A low shrubby plant 1 to 2 feet high, native to southern Europe. The trifoliolate leaves are slightly viscid, and the bright-rose flowers, an inch long, are in terminal leafy panicles.

For previous introduction see No. 66302.

76592. PRUNUS SERRULA TIBETICA (Batal.) Koehne. Amygdalaceae. **Cherry.**

A Chinese tree up to 30 feet high, with flaky brown bark, long pointed lanceolate leaves, clusters of one to three white flowers, and oval red fruits.

76593. PYRACANTHA CRENULATA RODGERSIANA A. B. Jacks. Malaceae. **Firethorn.**

An orange-fruited form of this Chinese shrub which has oblanceolate unequally serrulate leaves, 1 to 3 inches long, and rather loose corymbs of white flowers followed by clusters of orange fruits which persist throughout the winter and form a marked contrast to the evergreen leaves.

For previous introduction see No. 73446.

76594. RHAMNUS UTILIS Decaisne. Rhamnaceae. **Buckthorn.**

A slender-branched Chinese shrub up to 10 feet high, with narrowly elliptic yellowish green leaves 3 to 5 inches long, yellowish green flowers, and small black fruits.

For previous introduction see No. 63366.

76595. SARCOCOCCA RUSCIFOLIA Stapf. Buxaceae.

An evergreen Chinese shrub about 6 feet high, with ovate leaves 1 to 2 inches long, racemes of fragrant white flowers, and dark-scarlet berries.

76596. SARCOCOCCA RUSCIFOLIA CHINENSIS. (Franch.) Rehd. and Wils. Buxaceae.

A Chinese variety of *Sarcococca ruscifolia* with narrower leaves, but having similar white fragrant flowers and scarlet berries.

76597. SCHIZANDRA RUBRIFLORA (Franch.) Rehd. and Wils. Magnoliaceae.

A Chinese evergreen climbing shrub ovate denticulate leathery leaves 3 to 5 inches long, axillary clusters of dark-red flowers, and persistent bright-red berries.

For previous introduction see No. 63402.

76598. SIMMONDSIA CHINENSIS (Link.) C. Schneid. (*Buxus chinensis* Link.). Buxaceae.

An evergreen shrub 10 to 15 feet high, with small narrowly oblong leaves, native to southwestern California and western Mexico.

For previous introduction see No. 66282.

76599. SYRINGA KOMAROWI C. Schneid. Oleaceae. **Lilac.**

A Chinese shrub up to 15 feet high, with ovate leaves 5 to 7 inches long and nodding compact panicles of purple-pink flowers.

76550 to 76602—Continued.

76600. SYRINGA PALIBINIANA Nakai. Oleaceae. **Lilac.**

A shrub, native to Chosen, about 10 feet high, with slender upright branches, elliptic leaves 1 to 3 inches long, and loose panicles of pale-lilac or whitish flowers.

For previous introduction see No. 66314.

76601. VERONICA GAUNTLETTII Hort. Scrophulariaceae.

A hybrid with spikes 6 inches long of beautiful salmon-pink flowers.

For previous introduction see No. 66317.

76602. VIBURNUM HUPEHENSE Rehder. Caprifoliaceae. **Hupeh viburnum.**

A Chinese shrub about 6 feet high, with broadly ovate densely pubescent dentate leaves 2 to 3 inches long, cymes of small white flowers, and clusters of ovoid red fruits.

For previous introduction see No. 76189.

76603. ORYZA SATIVA L. Poaceae. Rice.

From India. Seeds obtained through the Federal Horticultural Board, New Orleans, La. Received April 28, 1928.

Patna paddy.

76604. ASTREBLA PECTINATA F. Muell. Poaceae. Mitchell grass.

From Sydney, New South Wales, Australia. Seeds purchased from Arthur Yates & Co. Received April 26, 1928.

An Australian grass which is said to be very valuable for its drought-enduring qualities as well as being valuable forage.

76605 to 76608.

From Tasmania, Australia. Presented by Mrs. Freida Cobb Blanchard, University of Michigan, Ann Arbor, Mich. Received April 27, 1928.

These seeds were collected in Cradle Valley, at an altitude of 3,000 feet.

76605. ATHROTAXIS CUPRESSOIDES Don. Pinaceae.

An evergreen Tasmanian tree about 40 feet high, somewhat resembling Cryptomeria, with ascending branches covered with closely appressed broad obtuse leaves one-sixth of an inch long and small woody spherical cones half an inch in diameter.

76606. ATHROTAXIS SELAGINOIDES Don. Pinaceae.

An evergreen Tasmanian tree about 50 feet high, somewhat resembling Cunninghamia, with spreading branches, loosely imbricated lanceolate leaves one-fourth of an inch long, and broadly ovate woody cones nearly an inch in diameter.

76607. LEPTOSPERMUM PUBESCENS Lam. Myrtaceae.

Variety *montanum.*—A subalpine form which is often a tree 60 to 70 feet high, with oblong leaves three-fourths of an inch long and white flowers an inch across.

76608. NOTHOFAGUS GUNNII (Hook. f.) Oerst. Fagaceae.

A dense bushy evergreen Tasmanian shrub 5 to 8 feet high, which is related to the northern beeches, with broadly oval leaves half an inch long and fruits resembling small beechnuts.

For previous introduction see No. 67825.

76609. ORYZA SATIVA L. Poaceae. Rice.

From Dacca, Bengal, India. Seeds presented by G. P. Hector, economic botanist. Received April 26, 1928.

Patnai. One of the chief varieties which go to make up the so-called "Patna" rice of trade. "Patna" is a trade name for a certain quality of rice exported from Calcutta, and consists of several botanical varieties.

76610 to 76634.

From Sumatra. Plants obtained through Prof. H. H. Bartlett, Director, Botanic Gardens and Arboretum, University of Michigan, Ann Arbor. Received October 5, 1927. Numbered May, 1928.

Nos. 76610 to 76614. June, 1924. Growing at Bandar Poeloe, Asahan, at an altitude of 600 feet.

76610. (Undetermined.)

No. 2.

76611. (Undetermined.)

No. 3.

76612. (Undetermined.)

No. 5.

76613. (Undetermined.)

No. 7.

76614. (Undetermined.)

No. 10.

76615. (Undetermined.)

No. 14. June, 1925. Growing at Bandar Poeloe, Asahan, at an altitude of 600 feet.

76616. (Undetermined.)

No. 22.

76617. (Undetermined.)

No. 23. June, 1925. Growing at Kisaran, Asahan, at an altitude of 50 feet.

76618. (Undetermined.)

No. 63. February, 1926. Growing at Bandar Poeloe, Asahan, at an altitude of 600 feet.

Nos. 76619 to 76622. August, 1925. Growing at Poeloe Mandi, Asahan, at an altitude of 75 feet.

76619. (Undetermined.)

No. 103.

76620. (Undetermined.)

No. 107.

76621. (Undetermined.)

No. 115.

76622. (Undetermined.)

No. 116.

76623. (Undetermined.)

No. 117.

76624. (Undetermined.)

No. 118. August, 1925. Growing at Poeloe Mandi, Asahan, at an altitude of 75 feet.

76625. (Undetermined.)

No. 133. July, 1925. Growing at Berastagi, Karoland, at an altitude of 4,800 feet.

76626. (Undetermined.)

No. 178. August, 1925. Growing at Arnhemia, Deli, at an atititude of 2,000 feet.

76610 to 76634—Continued.

76627. (Undetermined.)

No. 182. September, 1925. Growing at Kisaran, Asahan, at an altitude of 50 feet.

76628. (Undetermined.)

No. 183.

76629. (Undetermined.)

No. 184. September, 1925. Growing at Kisaran, Asahan, at an altitude of 50 feet.

76630. (Undetermined.)

No. 195. October, 1925. Growing at Marbau, Koealoe, at an altitude of 50 feet.

Nos. 76631 to 76633. August, 1925. Growing at Poeloe Mandi, Asahan, at an altitude of 75 feet.

76631. (Undetermined.)

No. 295.

76632. (Undetermined.)

No. 297.

76633. (Undetermined.)

No. 298.

76634. (Undetermined.)

No. 299. July, 1925. Growing at Bandar Poeloe, Asahan, at an altitude of 400 feet.

76635. ADANSONIA DIGITATA L. Bombacaceae. Baobab.

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, Director of the Agricultural Experiment Station at St. Croix. Received April 24, 1928.

Guinea Tamarind tree. An African tree about 60 feet high and sometimes 30 feet in diameter, with palmate leaves divided into five to seven lanceolate leaflets, large white flowers 6 inches across, and large gourdlike fruits the pulp of which is edible. The tree from which these seeds were taken measures 40 feet in circumference.

For previous introduction see No. 70895.

76636 to 76642.

From Blackwood, South Australia. Seeds presented by Edwin Ashby. Received April 27, 1928.

76636. BANKSIA COCCINEA R. Br. Proteaceae.

An erect shrub, 12 to 15 feet high, native to Western Australia, with broadly ovate leaves 2 to 3 inches long, and globular spikes, 2 inches in diameter, of brilliant red flowers.

76637. BEAUFORTIA PURPUREA R. Br. Myrtaceae.

A Western Australian evergreen shrub with wandlike branches, opposite lanceolate leaves one-fourth of an inch long, and small purple flowers in dense heads.

76638. CASSIA sp. Caesalpiniaceae.

A shrub or small tree native to Western Australia, with very graceful pinnate leaves.

76639. GREVILLEA BANKSII R. Br. Proteaceae.

Variety *Fosteri*. An Australian evergreen shrub, 6 to 8 feet high, with red flowers.

For previous introduction see No. 75563.

76640. GREVILLEA PRITZELII Diels. Proteaceae.

An Australian evergreen shrub with brownish pubescent branchlets, linear falcate leaves 3 to 5 inches long, and racemes, 2 to 3 inches long, of white flowers covered with dense white tomentum.

76636 to 76642—Continued.

76641. HOVEA PUNGENS Benth. Fabaceae.

A rigidly erect evergreen shrub 1 to 2 feet high, native to Western Australia, with linear-lanceolate coriaceous sharp-pointed leaves less than an inch long, and axillary clusters of small purplish flowers.

76642. HOVEA TRISPERMA Benth. Fabaceae.

A Western Australian evergreen undershrub, 1 to 2 feet high, with ovate to linear leaves 1 to 3 inches long and axillary clusters of rather large bluish flowers.

76643 to 76645.

From Mafeteng, Basutoland, South Africa. Presented by Sister Mary Prisca Oswald, Mount Olivet Mission. Received May 4, 1928.

76643. IRIS sp. Iridaceae.

Roots of an African variety.

76644. (Undetermined.)

Bulbs.

76645. (Undetermined.)

Roots.

76646 and 76647. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From Cheribon, Java. Cuttings presented by Dr. G. Wilbrink. Received May 7, 1928.

76646. [Received without notes.]

76647. *Glagah.*

76648 and 76649.

From China. Rhizomes collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received January 26, 1926. Numbered May, 1928.

76648. ARUNDINARIA sp. Poaceae. **Bamboo.**

No. 243. November 20, 1925. *Man lei chuk.* Rhizomes (some with plants attached) obtained about 3 miles southwest of Yunghui, Kwangsi, where the bamboo was found growing half cultivated on a steep, somewhat eroded hillside. This is a very straight, rather smooth jointed bamboo with stiff, upright branches in fascicles at the nodes and with thick leaves. In good soil it grows 5 or 6 meters high and 1.5 to 2.5 centimeters in diameter. The young stems have pith, and in the mature stems remnants of the pith diaphrams persist. The walls of the culms are medium in thickness. The smallest culms, 2 to 3 meters long, are used to make Chinese pens, and the larger ones are used as clothes-drying poles and mosquito-net poles. The shoots are edible. The rhizomes were found to be growing in a granular, yellow-brown residual soil. This bamboo is said to thrive best in a loose, rich, well-drained soil where there is a plentiful supply of moisture. Unlike those of most of the bamboos of the monopodial type, the rhizomes of this bamboo do not seem to have a bud at every node, but only at infrequent intervals. Also this bamboo has a tendency to sprout up from the base of the plant, after the fashion of bamboos of the sympodial type. It may be, therefore, that this bamboo may best be propagated by means of sections of rhizomes to which a young plant is attached.

76649. PHYLLOSTACHYS sp. Poaceae. **Bamboo.**

No. 248. November 22, 1925. *Kan chuk.* A small monopodial bamboo growing wild along the banks of the West River, near Wuchow, Kwangsi. The culms are 1 to 1.5 meters high and 1 to 1.5 centimeters in diameter. The young shoots, which begin to appear in April, are edible and are considered very delicious by the Chinese; it is not necessary to parboil them.

76648 and 76649—Continued.

The Chinese say that this bamboo is distinguished from No. 247 [No. 67398] by having culm sheaths pubescent and flowered with irregular dark spots.

76650 to 76677.

From Leningrad, Russia. Seeds presented by A. Kol, chief of the bureau of introduction of the Institute of Applied Botany. Received April 20, 1928.

76650 to 76672. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

Nos. 76650 to 76666 are from the Shatilovo Experiment Station.

76650. No. 25. Viatka Government.

76651. No. 97. Malmysh district, Viatka Government.

76652. No. 50. Nolin district, Viatka Government.

76653. No. 107. Malmysh district, Viatka Government.

76654. No. 113. Tchernigov Government.

76655. No. 123. Kiev Government.

76656. No. 125. Volyn Government, Ukraine.

76657. No. 152. Eniseysk Government. *Pyrorsky.*

76658. No. 167. Adygaysky district, Kuban Province.

76659. No. 192. Tchernigov Government.

76660. No. 219. Kungur district, Ural Province.

76661. No. 220. Kungur district, Ural Province.

76662. No. 221. Kungur district, Ural Province.

76663. No. 222. Kursk Government.

76664. No. 226. Fateyssky district, Kursk Government.

76665. No. 227. Lgov district, Kursk Government.

76666. No. 255. Minusinsk district, Altai Province.

Nos. 76667 to 76671 are from the Bekassovo Plant-Breeding Station of Forage Crops.

76667. No. 3168. *Altaysky.*

76668. No. 3262. *Nosovsky.*

76669. No. 3265. *Permsky.*

76670. No. 3266. *Podolsky.*

76671. No. 3270. *Palashkinsky.*

76672. A central Russian red clover (one cut clover), 1927, growing at the Shatilovo Experiment Station. Originally from the Orel Government.

76673 to 76677. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

Winter wheat varieties.

76673. *Kostianum* 0237. Saratov Experiment Station.

76674. *Lutescens* 0329. Saratov Experiment Station.

76675. *Cooperatorka.* Odessa Experiment Station.

76676. *Ukrainka.* Nironovsk Experiment Station.

76677. *Stepniatschka.* Odessa Experiment Station.

76678 to 76687.

From Kzyl Orda, Syr Daria, Russia. Seeds presented by Jules W. Rewiakin. Received April 19, 1928.

76678. ACER GINNALA SEMENOVII (Regel and Herd.) Pax. Aceraceae. **Maple.**

A shrubby Turkestan maple with leaves deeply cut into three or five narrow lobes and long-stemmed panicles of yellowish white fragrant flowers. The fruits turn red in ripening in the summer, and the leaves turn red in autumn.

For previous introduction see No. 42435.

76679. CARAGANA TURKESTANICA Komarow. Fabaceae.

A spiny shrub or small tree, native to Turkestan, with compound leaves of 6 to 12 ovate leaflets and a profusion of bright-yellow pea-shaped flowers an inch long.

76680. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

A mixture of various wild forms of the common cultivated apple.

76681. PERILLA FRUTESCENS (L.) Britton (*P. ocymoides* L.). Menthaceae. **Perilla.**

Sou tze. An annual Chinese herb the seeds of which are used as bird feed and also to produce an oil used for waterproofing paper.

For previous introduction see No. 65874.

76682 to 76684. PRUNUS spp. Amygdalaceae.

76682. PRUNUS CERASUS L. **Sour cherry.**

Variety *montana.* The wild form of the generally cultivated sour cherry.

76683. PRUNUS DOMESTICA L. **Garden plum.**

Variety *montana.* Said to be the wild form of the common garden plum.

76684. PRUNUS MANDSHURICA (Maxim.) Koehne. **Manchurian apricot.**

A small wild tree up to 15 feet high, native to Manchuria, with spreading branches. The ovate-acuminate leaves are sharply doubly serrate, the pinkish solitary flowers are an inch across, and the yellow subglobose fruits are an inch in diameter.

For previous introduction see No. 65649.

76685. PYRUS HETEROPHYLLA Regel and Schmalh. Malaceae. **Pear.**

A wild Turkestan shrub or small tree up to 30 feet high, with ovate leaves varying from nearly undivided to deeply pinnately cut into slender lobes, clusters of white flowers an inch across, and pear-shaped or globose fruits an inch in diameter.

For previous introduction see No. 73617.

76686. TILIA MONTANA Hort. Tiliaceae. **Lime tree.**

76687. ZEA MAYS L. Poaceae. **Corn.**

Tetysou pearl. A variety of pop corn.

76688. SOLANUM MACROCARPON L. Solanaceae.

From Luchenza, Nyasaland, Africa. Seeds presented by L. S. Norman. Received April 21, 1928.

A stout undershrub with a much-branched smooth stem and ovate sinuate-margined leaves 8 inches long. The racemose cymes, opposite the leaves, bear blue-purple flowers 1 to 2 inches broad, which are followed by globose yellow fruits the size of an apple.

For previous introduction see No. 75971.

76689. GLADIOLUS TRISTIS L. Iridaceae. **Gladiolus.**

From Kirstenbosch, Newlands, Cape Province, Africa. Seeds presented by R. H. Compton, Director of the National Botanic Gardens. Received April 20, 1928.

A South African bulbous perennial with flat linear leaves 1 to 2 feet long and lax spikes of yellow flowers streaked with purple, which have a strong lemon fragrance at night, but are scentless during the day.

For previous introduction see No. 62860.

76690 and 76691. ZEA MAYS L. Poaceae. **Corn.**

From Leningrad, Russia. Seeds presented by A. Kol, chief of the bureau of introduction of the Institute of Applied Botany. Received April 20, 1928.

76690. No. 271 vi–24. *Hordeiforme* 05.

76691. *Perbenetz.* From Altai Province.

76692 to 76694. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Yokohama, Japan. Seeds purchased from the Yokohama Nursery Co. Received April 20, 1928.

Japanese varieties.

76692. *Chinese giant* eggplant.

76693. *Japanese long* eggplant.

76694. *Japanese round purple* eggplant.

76695. ZEA MAYS L. Poaceae. **Corn.**

From Algiers, Algeria. Seeds presented by the Directeur, Institut Agricole d'Algérie, Station de Semences de Maison-Carrée. Received April 28, 1928.

An Algerian variety.

76696. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Silay, Negros Occidental, Philippine Islands. Cuttings presented by R. C. Pitcairn, Hawaiian-Philippine Co., through E. W. Brandes, Bureau of Plant Industry. Received May 1, 1928.

A Philippine variety.

76697. VOANDZEIA SUBTERRANEA (L.) Thouars. Fabaceae.

From Macequeco, Mozambique. Seeds presented by R. G. Garvin. Received May 3, 1928.

Juga Nymo. An African variety grown by the natives along the eastern coast of Africa as far south as Natal. It is an underground bean with the true bean flavor and has the same habits of growth as the peanut, doing best in sandy loam. The yield here is at least 25 per cent greater than the peanut.

For previous introduction see No. 68972.

76698. BAMBUSA sp. Poaceae. **Bamboo.**

From Oneco, Fla. Cuttings presented by Reasoner Bros., Royal Palm Nurseries, through R. A. Young, Bureau of Plant Industry. Received May 11, 1928.

A medium-sized, semihardy, clump bamboo which much resembles *Bambusa thouarsii* but is thought to be different from it. It is believed to be an early introduction by the United States Department of Agriculture, but the record of it has been lost.

76699. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Port au Prince, Haiti. Seeds presented by H. D. Barker, Service Technic. Received May 11, 1928.

Madame Russell.

76700. MUSSAENDA ERYTHROPHYLLA Schum. and Thonn. Rubiaceae.

From West Africa. Cuttings collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 29, 1927. Numbered April, 1928.

No. 1179. Collected between Buea and Victoria, Cameroon, February 13, 1927. A climbing shrub often reaching a great height. One sepal in each flower cluster expands into a beautiful bright-red floral bract about 3 inches long. The style is remarkably beautiful, and the fact that it flowers in winter should make it worthy of a very wide distribution throughout the Tropics.

76701 to 76724.

From Australia. Seeds presented by Mrs. Frieda Cobb Blanchard, University of Michigan, Ann Arbor, Mich. Received April, 1928.

Unless otherwise stated these seeds were obtained in National Park, Tasmania.

76701. ACACIA RICEANA Henslow. Mimosaceae. **Rice acacia.**

No. 66. Botanic Garden, Hobart, Tasmania. An erect much-branched Tasmanian shrub 6 to 10 feet high, with spreading and drooping branches, filiform to lanceolate leaves 1 to 2 inches long, and globular heads of pale citron flowers in long loose spikes.

For previous introduction see No. 48061.

76702. ANOPTERUS GLANDULOSUS Labill. Escalloniaceae.

No. 32. A tall evergreen Tasmanian shrub with spreading branches, oblong dentate leaves 4 to 6 inches long clustered at the ends of the branches, and axillary racemes of white flowers.

For previous introduction see No. 67805.

76703. ASTELIA ALPINA R. Br. Liliaceae.

No. 1. A densely tufted alpine Tasmanian plant forming compact mats covered with loose silky white hairs. The leaves are 6 to 12 inches long, and the panicles of small flowers on slender short stems are followed by bright-red berries.

76704. ATHEROSPERMA MOSCHATUM Labill. Monimiaceae.

No. 48. An erect Tasmanian tree with opposite ovate leaves 1 to 3 inches long, white tomentose beneath, and small axillary flowers clustered at the ends of the branches, followed by white villous carpels resembling short clematis fruits.

76705. BILLARDIERA LONGIFLORA Labill. Pittosporaceae.

No. 36. A Tasmanian climbing shrub with linear to elliptical leaves, solitary pendulous dull-yellow or blue flowers an inch long, and red, white, or blue berries half an inch in diameter.

For previous introduction see No. 64597.

76706. BILLARDIERA SCANDENS J. E. Smith. Pittosporaceae.

No. 68. From the garden of L. Rodway, Government botanist, Hobart, Tasmania. Similar to *Billardiera longiflora*, but with larger leaves and berries which are usually yellow.

76701 to 76724—Continued.

76707. CLEMATIS ARISTATA R. Br. Ranunculaceae.

No. 33. A Tasmanian evergreen vine with 3-foliolate leaves which are often variegated and corymbs of fragrant white flowers 2 inches across.

76708. COPROSMA HIRTELLA Labill. Rubiaceae.

A shrub, 3 to 5 feet high, growing on a cliff. It is also native to Australia, has nearly orbicular leaves 2 inches long, and axillary and terminal clusters of small flowers followed by red to black berries one-fourth of an inch across.

76709. CYATHODES DIVARICATA Hook. f. Epacridaceae.

A shrub about 2 feet high found in rocky places. It is a much-branched juniperlike shrub, native to Tasmania, with rigid narrow leaves half an inch long, small white flowers on recurved peduncles, and fleshy pink berries one-fourth inch in diameter.

For previous introduction see No. 67812.

76710. CYATHODES GLAUCA Labill. Epacridaceae.

A shrub about 2 feet high, found in rocky places. It is a Tasmanian shrub sometimes 30 feet high, with clusters of linear leaves white beneath, small white flowers on bracted stems in axillary or terminal clusters, and flattened fleshy purplish berries.

76711. DIANELLA TASMANICA Hook. f. Liliaceae.

A Tasmanian herbaceous perennial 4 to 5 feet high, with sword-shaped serrate leaves 2 to 4 feet long, a lax panicle of nodding pale-blue flowers, and bright-blue fruits on slender pedicels.

76712. DILLWYNIA ERICIFOLIA J. E. Smith. Fabaceae.

No. 45. An erect heathlike Australian shrub 2 to 3 feet high, with linear leaves less than an inch long and terminal leafy clusters of small yellow flowers.

76713. DIPLARRHENA MORAEA Labill. Iridaceae.

No. 31. An Australian herbaceous perennial with a short creeping rootstock, numerous thick flat pale-green leaves an inch wide and 1 to 2 feet long. The flower stem is 2 feet high with a terminal spike of a few flowers opening one at a time, the outer segments white and spreading and the inner erect and yellow.

76714. DRYMOPHILA CYANOCARPA R. Br. Convallariaceae.

No. 42. A tuberous herbaceous Tasmanian perennial with slender erect stems 2 feet high, alternate lanceolate leaves in two rows near the top of the stem, and small white axillary flowers followed by bright-blue berries.

76715. LEPTOMERIA BILLARDIERI R. Br. Santalaceae.

No. 38. An erect much-branched Tasmanian shrub 4 to 5 feet high, with slender green branches, the leaves falling while minute, and small racemes of pinkish white flowers.

76716. NOTELAEA LIGUSTRINA Vent. Oleaceae.

No. 65. Port Arthur, Tasmania. A diffusely branched tall shrub or small tree, native to Tasmania and Australia. The opposite entire-lanceolate leaves are 1 to 3 inches long, the small flowers are in slender axillary racemes near the ends of the branches, and the succulent globular fruits, half an inch in diameter, vary from white through pink to dark purple.

76701 to 76724—Continued.

76717. OLEARIA PERSOONIOIDES (DC.) Benth. Asteraceae. **Daisytree.**

No. 20. An evergreen Tasmanian shrub 3 to 5 feet high, with obovate leaves 1 to 2 inches long, silvery white beneath, and leafy panicles of white asterlike flowers.

For previous introduction see No. 67827.

76718. PENTACHONDRA PUMILA (Forst.) R. Br. Epacridaceae.

A mosslike plant about half an inch high with very small ovate leaves, short-stalked tubular flowers, and bright-red berries about the size of a pea.

76719. PHYLLOCLADUS RHOMBOIDALIS L. Rich. Taxaceae.

No. 67. Botanic Gardens, Hobart, Tasmania. A Tasmanian tree up to 60 feet high, with spreading or depressed branches and branchlets developed into rhomboidal leaflike organs.

For previous introduction see No. 74506.

76720. PIMELEA DRUPACEA Labill. Thymelaeaceae.

A Tasmanian shrub 4 to 6 feet high, with opposite-oblong leaves 2 inches long, pinkish white flowers in small terminal heads, and black fleshy fruits.

76721. PROSTANTHERA LASIANTHOS Labill. Menthaceae.

No. 34. A tall erect Tasmanian shrub up to 12 feet high, with lanceolate serrate leaves 3 inches long and terminal compound racemes of purple-marked white flowers.

76722. RUBUS GUNNIANUS Hook. Rosaceae.

No. 25. A small creeping Tasmanian perennial with trifoliolate leaves, yellowish white solitary flowers nearly an inch across, and scarlet berries made up of a few carpels each a third of an inch in diameter.

76723. TROCHOCARPA THYMIFOLIA (R. Br.) Spreng. Epacridaceae.

A small spreading Tasmanian shrub with thick ovate leaves on recurved petioles, dense terminal nodding spikes of red flowers, and purple fleshy fruits half an inch in diameter.

76724. VIOLA HEDERACEA Labill. Violaceae. **Violet.**

No. 26. A small tufted creeping violet, native to Tasmania and Australia, with reniform leaves and white to blue flowers with short spurs.

76725. LITTONIA MODESTA Hook. f. Melanthiaceae.

From east Africa. Seeds presented by Oscar Thompson, United States vice consul, Nairobi, through L. W. Kephart, Bureau of Plant Industry. Received April 10, 1928.

No. 697. A brilliant red or reddish orange lilylike plant climbing by tendrils at the tips of the leaves. It is found in moist areas in western Kenya Colony and western Uganda, and at Koru, Kenya Colony, where these seeds were gathered, it makes a vigorous ornamental. In this region, at an altitude of 8,000 feet, it is occasionally subjected to frost.

For previous introduction see No. 31849.

76726. COCCOTHRINAX sp. Phoenicaceae. **Silver palm.**

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, director of the agricultural experiment station. Received April 11, 1928.

A form of the silver palm which is native to the island of St. Thomas.

76727. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From Rae Bareilly, United Provinces, India. Seeds presented by Dr. S. S. Nehru, deputy commissioner, through C. R. Ball, Bureau of Plant Industry. Received April 14, 1928.

A variety grown locally.

76728 to 76731.

From Elstree, Herts, England. Seeds presented by Hon. Vicary Gibbs, Aldenham House Gardens. Received April 16, 1928.

76728. CARMICHAELIA FLAGELLIFORMIS Colenso. Fabaceae.

For previous introduction and description see No. 76562.

76729. COTONEASTER ACUMINATA Lindl. Malaceae.

For previous introduction and description see No. 76571.

76730. COTONEASTER ALDENHAMENSIS Hort. Malaceae.

76731. PYRACANTHA CRENULATA RODGERSIANA A. B. Jacks. Malaceae. **Firethorn.**

For previous introduction and description see No. 76593.

76732. CHAETOSPERMUM GLUTINOSA (Blanco) Swingle. Rutaceae. **Tabog.**

From Santiago de las Vegas, Cuba. Seeds presented by Dr. Gonzalo M. Fortun, director, agricultural experiment station. Received April 18, 1928.

A small spiny Philippine tree with trifoliolate leaves, small clusters of rather large white flowers, and oblong hard-shelled fruits. This tree is being tested as a stock for commercial citrus fruits.

For previous introduction see No. 40550.

76733. VITIS AMURENSIS Rupr. Vitaceae. **Amur grape.**

From Mefun, Manchuria. Cuttings collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received December 23, 1925. Numbered April, 1928.

No. 4733. November 12, 1925. A wild grape with large bunches of purple, acid berries about the size of a marrowfat pea. They are eaten fresh and also made into wine. This variety is hardy in the mountains of this region.

For previous introduction see No. 69895.

76734. SALVIA sp. Menthaceae. **Sage.**

From Huautla de Jimenez, Oaxaca, Mexico. Seeds presented by C. M. Holmes. Received April 19, 1928.

A local variety growing at an altitude above 4,000 feet, with very attractive gentian or even darker blue flowers of good size.

76735 to 76745.

From Harbin, Manchuria. Seeds presented by A. A. Rachkowsky, Manchurian Research Society. Received April 17, 1928.

76735. BETULA JAPONICA MANDSHURICA (Regel) Winkl. Betulaceae. **Birch.**

A white-barked Manchurian tree up to 80 feet high, with the leaves often broadly wedge-shaped at the base.

For previous introduction see No. 44382.

76735 to 76745—Continued.

76736. JUGLANS MANDSHURICA Maxim. Juglandaceae. **Walnut.**

A variety grown locally.

For previous introduction see No. 71257.

76737. LILIUM DAURICUM Ker. Liliaceae. **Candlestick lily.**

A Manchurian species with a stem about 3 feet high bearing horizontal leaves 3 to 5 inches long and terminal clusters of one to five cup-shaped flowers 5 inches across, which are orange-red spotted with purplish black and tinged with yellow inside.

For previous introduction see No. 75678.

76738. LILIUM TENUIFOLIUM Fisch. Liliaceae. **Coral lily.**

A Siberian species with a slender stem 1 to 2 feet high, 40 to 60 linear light-yellow green leaves 1 to 2 inches long, and terminal clusters of 1 to 15 small nodding turkscap lilies, of the most brilliant sealing-wax red.

For previous introduction see No. 64773.

76739 to 76744. PRUNUS spp. Amygdalaceae.

76739. PRUNUS GLANDULOSA Thunb. **Flowering almond.**

A Chinese shrub 3 to 5 feet high, with lanceolate to ovate leaves, pink or white flowers, and red fruits which make excellent preserves.

For previous introduction see No. 69098.

76740 to 76743. PRUNUS MANDSHURICA (Maxim.) Koehne. **Manchurian apricot.**

For previous introduction and description see No. 76684.

76740. Mixed seeds.

76741. The best wild variety.

76742. Variety *subcordata*.

76743. [No data.]

76744. PRUNUS SIBIRICA L. **Siberian apricot.**

A bushy shrub or sometimes a small tree up to 15 feet high, native to Siberia. The long acuminate-ovate leaves are 2 to 3 inches long and reddish when young, turning bright green; the solitary white or pink flowers are an inch across, and the fruits are yellow with a red cheek but have very little flesh and are hardly edible.

For previous introduction see No. 68819.

76745. VIBURNUM BUREJAETICUM Regel and Herd. Caprifoliaceae.

A Manchurian shrub up to 15 feet high, with stellate-pubescent branchlets, sinuately toothed ovate leaves 4 to 5 inches long, dense cymes of white flowers, and ellipsoid bluish black fruits.

For previous introduction see No. 69820.

76746. ACACIA sp. Mimosaceae.

From Mandelieu, Alpes Maritimes, France. Plants presented by A. Richon. Received February 19, 1926. Numbered April, 1928.

Bon Accueil. This is a chance hybrid, perhaps between *Acacia decurrens* and *A. dealbata*. It is considered one of the most beautiful acacias grown on the Riviera. The flower clusters have up to 40 heads, larger than the best varieties of *A. dealbata;* they are beautifully grouped at the ends of the branches. The leaves are bright green with long, very fine leaflets. The tree is vigorous and about 20 feet high, but a little less hardy than *A. dealbata*.

For previous introduction see No. 61798.

76747. ACTINIDIA ARGUTA (Sieb. and Zucc.). Planch. Dilleniaceae. **Bower actinidia.**

From Manchuria. Cuttings collected by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received December 23, 1925. Numbered April, 1928.

No. 4736. Mefun, November 12, 1925. These cuttings are from the vine from which seeds were sent under No. 4156 [No. 65484]. This vine bears edible fruits of good size and is an attractive ornamental.

76748 and 76749. THUNBERGIA spp. Acanthaceae.

From Gladwyne, Pa. Plants presented by Mrs. J. Norman Henry. Received May 11, 1928.

76748. THUNBERGIA GIBSONI S. Moore. **Clockvine.**

A climbing vine, native to tropical east Africa, with triangular hairy leaves and large solitary orange-red flowers.

For previous introduction see No. 51240.

76749. THUNBERGIA sp.

A thunbergia said to be native to the Himalayas.

76750. FRAGARIA VIRIDIS Duchesne (*F. collina* Ehrh.). Rosaceae. **Strawberry.**

From Paris, France. Plants presented by Vilmorin-Andrieux & Co. Received March 29, 1928. Numbered June, 1928.

A European strawberry which closely resembles *Fragaria vesca*, but the fruits have a musky odor.

For previous introduction see No. 37691.

76751. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

From Paris, France. Scions presented by A. Pasquier des Mazis, Ancien Directeur de l'Union Agricole de France. Received April 2, 1928.

Bonne hoture. A delicious apple grown chiefly near Bauge, Maine et Loire. It makes a very good jelly.

76752 to 76754. QUERCUS spp. Fagaceae.

From Yokohama, Japan. Seeds presented by R. C. B. Gardner, Northwood, Middlesex, England. Received April 9, 1928.

76752. QUERCUS ACUTISSIMA Caruthers (*Q. serrata* S. and Z., not Thunb.). **Bristletooth oak.**

A handsome eastern Asiatic tree up to 50 feet high, with half-evergreen obovate to oblong sharp-pointed leaves 5 to 7 inches long having serrate bristle-pointed margins. The cup which covers about two-thirds of the acorn has long spreading recurved scales.

For previous introduction see No. 54433.

76753. QUERCUS DENTATA Thunb. **Daimyo oak.**

A large tree 75 to 80 feet tall, native to Chosen and northern and western China. The obovate-sinuate lobed leaves, dark green above and grayish tomentose beneath, are 10 to 12 inches long and 9 inches wide, and the ovoid acorns, an inch wide, are about half covered by the cup which has lanceolate spreading scales.

For previous introduction see No. 72162.

76752 to 76754—Continued.

76754. QUERCUS GLAUCA Thunb. **Oak.**

A handsome evergreen Japanese tree 45 feet high, with ovatedentate leaves 3 to 5 inches long, lustrous above and glaucous beneath, and ellipsoid acorns nearly an inch long with saucer-shaped cups having five to seven concentric silky pubescent rings.

76755. FICUS ROXBURGHII Wall. Moraceae. **Fig.**

From Calcutta, India. Fruits presented by C. C. Calder, Superintendent of the Royal Botanic Garden. Received April 5, 1928.

A low-spreading Indian tree 20 to 30 feet high, with broadly ovate-cordate entire or toothed leaves and russet-brown or purple fruits 2 inches in diameter.

76756. HAEMATOXYLUM CAMPECHIANUM L. Caesalpiniaceae. **Logwood.**

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, director of the agricultural experiment station. Received April 7, 1928.

A tropical American tree up to 40 feet high, which yields the logwood of commerce used for dyes and inks.

For previous introduction see No. 43775.

76757. TRACHYLOBIUM HORNEMANNIANUM Hayne. Caesalpiniaceae.

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by A. H. Kirby, Director of the Department of Agriculture. Received April 3, 1928.

A large tropical South African tree with compound leaves, panicles of small flowers, and ovoid resinous warted pods 2 inches long. This tree produces most of the copal gum of commerce.

76758. CORYPHA UMBRACULIFERA L. Phoenicaceae. **Talipot palm.**

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator of the Royal Botanic Gardens of the Department of Agriculture. Received April 10, 1928.

A large palm up to 80 feet high, which dies after fruiting. The leaves, 12 feet long and 16 feet broad, are made up of lobed segments, and the creamy white flowers are in terminal panicles 20 feet long. It is native to Ceylon.

For previous introduction see No. 76048.

76759 to 76768.

From Brignoles, France. Seeds presented by R. Salgues, Director of the Brignoles Botanic Station. Received April 2, 1928.

76759. BRACHYPODIUM PHOENICOIDES (L.) Roem. and Schult. Poaceae. **Grass.**

A perennial European grass 1 to 2 feet high, with narrowly linear leaves, slender stems, and narrow flower clusters having oblong spikelets sessile on the axis.

For previous introduction see No. 75529.

76760. CISTUS SALVIFOLIUS L. Cistaceae. **Salvia rockrose.**

A shrub native to the Mediterranean region, procumbent or up to 2 feet high, with rigid rugose oblong leaves and solitary or clustered white flowers 1 to 2 inches across.

76761. ELICHRYSUM STOECHAS DC. Asteraceae. **Everlasting.**

A yellow-flowered evergreen shrub about 2 feet high, native to the Mediterranean region.

For previous introduction see No. 68143.

76759 to 76768—Continued.

76762. HIPPOCREPIS COMOSA L. Fabaceae.

A European herbaceous perennial legume prostrate or up to 2 feet high, with 7 to 11 obovate leaflets, umbels of yellow flowers, and pods made up of segments shaped like a horseshoe.

76763. HIPPOCREPIS MULTISILIQUOSA L. Fabaceae.

A southern European annual legume 1 to 2 feet high, with pinnate leaves, yellow flowers, and flat curved pods made up of horseshoe-shaped segments.

For previous introduction see No. 67266.

76764. INULA VISCOSA Ait. Asteraceae.

A southern European shrubby perennial 1 to 2 feet high, with yellow flowers.

For previous introduction see No. 67167.

76765. PSORALEA BITUMINOSA L. Fabaceae.
Scurf-pea.

A herbaceous perennial legume about 3 feet high, native to the Mediterranean region, thriving in dry calcareous soil. The leaves are trifoliolate and the small bluish flowers are in heads. The plant has a strong bituminous odor but is said to make good hay.

For previous introduction see No. 67169.

76766. SCILLA AUTUMNALIS L. Liliaceae.
Autumn squill.

An autumn-flowering North African bulbous perennial with slender leaves and loose racemes of rosy pink flowers half an inch wide appearing before the leaves.

For previous introduction see No. 66967.

76767. SCORPIURUS SUBVILLOSA L. Fabaceae.

A low annual legume, native to the Mediterranean region, with narrow simple leaves, small yellow flowers, and curled papillose pods resembling caterpillars.

For previous introduction see No. 68149.

76768. TAMUS COMMUNIS L. Dioscoreaceae.

A Mediterranean herbaceous twining vine with a tuberous root, ovate-cordate obscurely lobed leaves about 3 inches long, and loose clusters of small yellowish green flowers followed by bright-red berries.

For previous introduction see No. 69861.

76769 and 76770.

From Hailar, Manchuria. Seeds presented by N. Glowkhoff, superintendent of the Manchurian Agricultural Society, through G. C. Hanson, United States consul, Harbin. Received April 3, 1928.

76769. IRIS sp. Iridaceae.

A yellow iris.

76770. PRUNUS SIBIRICA L. Amygdalaceae.
Siberian apricot.

A spreading shrub or small tree up to 15 feet high, growing on the southern and southeastern slopes of stony mountains in northeastern Asia, where the soil is not very thick. It has long-pointed serrate-ovate leaves, solitary white or pinkish flowers an inch across, and an abundance of yellow fruits, with reddish cheeks, which have very little flesh and are hardly edible.

For previous introduction see No. 68819.

76771 to 76774.

From Peradeniya, Ceylon. Seeds presented by the manager of the publication depot and central seed store of the Department of Agriculture. Received April 6, 1928.

76771. BRADBURYA PUBESCENS (Benth.) Kuntze (*Centrosema pubescens* Benth.). Fabaceae.

A creeping tropical vine used as a cover crop in the East Indies.

For previous introduction see No. 72430.

76772. CROTALARIA STRIATA DC. Fabaceae.

A native leguminous plant of possible use as a cover plant.

For previous introduction see No. 71807.

76773. DEGUELIA ROBUSTA (Roxb.) Kuntze (*Derris robusta* Benth.). Fabaceae.

A tree 30 to 40 feet high, native to the lower Himalayas, with grayish branchlets, compound leaves of 7 to 19 leaflets 2 inches long and gray beneath, and whitish flowers in loose racemes about 6 inches long.

76774. MEIBOMIA GYROIDES (DC.) Kuntze (*Desmodium gyroides* DC.). Fabaceae.

A shrubby leguminous plant 8 to 10 feet high, native to the warmer parts of the central and eastern Himalayas. It has hairy leaves and terminal clusters of red flowers.

For previous introduction see No. 68860.

76775 and 76776.

From Pretoria, Transvaal, Union of South Africa. Seeds presented by E. Percy Phillips, Division of Botany. Received April 9, 1928.

76775. BAUHINIA GALPINI N. E. Brown. Caesalpiniaceae.

A South African climbing shrub 5 to 10 feet high. The leaves, two lobed at the apex, are 1 to 3 inches long, and the brick-red flowers are borne continuously from spring to late autumn.

For previous introduction see No. 66148.

76776. BOLUSANTHUS SPECIOSUS (Bolus) Harms. (*Lonchocarpus speciosus* Bolus). Fabaceae.

A small ornamental South African tree with compound leaves and long racemes of violet flowers. The hard white durable timber is used for wheel spokes.

For previous introduction see No. 55555.

76777 to 76779.

From Ceylon and Straits Settlements. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 19, 1926. Numbered April, 1928.

76777. COUROUPITA GUIANENSIS Aubl. Lecythidaceae.

No. 890. Royal Botanic Garden, Peradeniya, June 9, 1926. The cannon-ball tree, native to Guiana, is one of the strangest freaks of the vegetable kingdom. It is a large handsome tree producing pink fleshy flowers of curious shape on special crooked branches rising from the trunk. These flowers are followed by cannon-ball-shaped fruits 4 to 5 inches in diameter.

For previous introduction see No. 67994.

76778. IXORA BANDHUCA Roxb. Rubiaceae.

No. 834. Botanic Garden, Singapore, May 31, 1926. A stout-branched shrub, native to India, with coriaceous cordate-oblong leaves 2 to 4 inches long, cymes of scarlet or yellow flowers, and fleshy fruits the size of a pea.

76777 to 76779—Continued.

76779. IXORA COCCINEA L. Rubiaceae.
Scarlet ixora.

No. 836. Botanic Garden, Singapore, May 31, 1926. A hybrid, with salmon-pink flowers, which is a vigorous grower.

76780 to 76785.

From Hailar, Manchuria. Seeds presented by N. Glowkhoff, superintendent of the Manchurian Agricultural Society, through G. C. Hanson, United States consul, Harbin. Received April 3, 1928.

76780. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

No. 5. This variety was found by Mr. Glowkhoff in his field as an admixture. Barley is seldom sown in this section.

76781 to 76785. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

76781 and 76782. A soft awnless wheat, growing well in bushes, with large spikes and seeds.

76781. No. 1. 1926 wheat.

76782. No. 1. 1927 wheat.

76783. No. 0. 1926 wheat. A hard variety, with a large tetrahedral awned spike of a blue-black color, which grows well in bushes, and endures droughts and frosts very well. It ripens about three or four days later than No. 1 and does not fall down. It is very difficult to thresh.

76784. No. 2. An awned wheat with reddish straw, red spikes, and reddish seeds, which grows well in bushes. The spike is big, but the seeds are somewhat smaller than those of No. 1. It ripens about 10 or 12 days earlier than No. 1, does not fall down so quickly, and threshes well. It is found now as an admixture, sometimes reaching 30 per cent.

76785. No. 3. An awned wheat, with silvery white straw and spike. It does not fall down, and ripens about the same time as No. 1. It is found as an admixture from 10 to 15 per cent.

76786 and 76787.

From Mafeteng, Basutoland, South Africa. Seeds presented by Sister Mary Prisca Oswald, Mount Olivet Mission. Received May 4, 1928.

76786. CAESALPINIA GILLIESII (Hook.) Wall. Caesalpiniaceae.

Tree of Paradise. A tall shrub or small tree, native to Argentina, with pinnately compound leaves and terminal racemes of light-yellow flowers from which the brilliant red stamens protrude 3 to 5 inches.

For previous introduction see No. 43770.

76787. RICINUS COMMUNIS L. Euphorbiaceae.
Castor-bean.

An African variety. It is one of the small-seeded varieties valuable for oil.

76788. STRELITZIA REGINAE Banks. Musaceae. Bird-of-paradise-flower.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received May 4, 1928.

A South African plant with a creeping rhizome from which grow the bananalike leaves with petioles 4 feet long and lanceolate blades 2 feet long. The flowers are borne on a stem 3 to 4 feet high and grow out from the margin of a purple-edged bright-green bract 8 inches long. The orange-yellow lanceolate sepals are 3 to 4 inches long, and the dark-blue arrow-shaped petals are 2 inches long.

76789. SOLANUM TUBEROSUM L. Solanaceae. Potato.

From Lima, Peru. Tubers presented by Prof. Julio Gaudron, Estacion Central Agronómica. Received May 10, 1928.

Papa amarilla. A yellow-fleshed Peruvian variety.

76790. ROYSTONEA REGIA (H. B. K.) O. F. Cook (*Oreodoxa regia* H. B. K.). Phoenicaceae. Cuban royal palm.

From Cuba. Seeds obtained through G. S. Jamieson, Bureau of Chemistry. Received May 9, 1928.

A Cuban palm up to 80 feet high and 2 feet in diameter, with pinnately divided leaves 10 feet long.

For previous introduction see No. 51139.

76791. VIBURNUM SARGENTI CALVESCENS Rehder. Caprifoliaceae.

From Jamaica Plain, Mass. Seeds collected by Paul Russell, Bureau of Plant Industry. Received May 12, 1928.

Arnold Arboretum No. 4677–3. Originally collected in Chosen in 1904. A form, with leaves smooth beneath, of *Viburnum sargenti* which is a shrub up to 12 feet high native to northeastern Asia, having 3-lobed leaves with the middle lobe much elongated, cymes of white flowers, and scarlet fruits.

76792 to 76795. LINUM spp. Linaceae. Flax.

From Groningen, Netherlands. Seeds presented by Dr. T. Tammes, of the University of Groningen, through A. C. Dillman, Bureau of Plant Industry. Received May 18, 1928.

76792. LINUM ANGUSTIFOLIUM Huds.

An annual or perennial herbaceous plant native to Europe and western Asia, with decumbent stems, small linear leaves, and small blue flowers. It is considered by some authorities to have been the original species from which the cultivated flax was developed.

76793 to 76795. LINUM USITATISSIMUM L.

76793. Variety *crepitans.*

76794. Variety *winter flax.*

76795. Variety *Egyptian.*

76796. ROSA sp. Rosaceae. Rose.

From Port au Prince, Haiti. Cuttings presented by H. D. Barker, Service Technique. Received May 23, 1928.

Eglantine. A rose used in Haiti as a stock.

76797 and 76798.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received May 23, 1928.

76797. RUBUS COPELANDII Merr. Rosaceae.
Bramble.

Copela. A robust Philippine bramble with ascending arching spiny canes 10 feet long. The leaves are trifoliolate, and the orange-red berries are juicy and edible, but lacking in flavor.

76798. VACCINIUM MYRTOIDES Miquel. Vacciniaceae.

Alimani. A small upright Philippine shrub 3 to 4 feet high, with small leathery leaves and clusters of small black berries which are juicy, sweet, subacid, and of excellent flavor.

76799. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Sayapullo, Trujillo, Peru. Tubers presented by A. Martin Lynch. Received May 24, 1928.

A yellow-fleshed Peruvian variety.

76800 to 76819. AVENA SATIVA L. Poaceae. **Oats.**

From Tiehlingho post office, Kirin Province, Manchuria. Seeds presented by A. D. Woeikoff, director of the experimental farm, Echo. Received March 29, 1928. Numbered April, 1928.

76800. No. 344–2228 Bb. Originally from the agricultural experiment station, Prerov.

76801. No. 345–2229 Bi. Originally from the agricultural experiment station, Prerov.

76802. No. 346–2230 Bk. Originally from the agricultural experiment station, Prerov.

76803. No. 353–2233 C–5. Originally from the agricultural experiment station, Prerov.

76804. No. 354–2237. *Doupovsay.* Originally from the agricultural experiment station, Prerov.

76805. No. 355–744. *Dreger's white No. 59.* Originally from the Department of Agriculture, Praha, Czechoslovakia.

76806. No. 356–745. *Dreger's yellow No. 60.* Originally from the Department of Agriculture, Praha, Czechoslovakia.

76807. No. 362–2238. *Horsky Zelenae.* Originally from the agricultural experiment station, Prerov.

76808. No. 369–2239. *Jesenicky.* Originally from the agricultural experiment station, Prerov.

76809. No. 375 2226. *Kherson.* Originally from the Department of Agriculture, Southern Rhodesia, Africa.

76810. No. 376–2227. *Kinvarra.* Originally from the Department of Agriculture, Southern Rhodesia, Africa.

76811. No. 377–2234. *Krajový 6–a.* Originally from the agricultural experiment station, Prerov.

76812. No. 378–2245. *Krajovy 5–c.* Originally from the agricultural experiment station, Prerov.

76813. No. 379–2236. *Krajovy 14–c.* Originally from the agricultural experiment station, Prerov.

76814. No. 383–706. *Ling tang mai.* From the Chinese farmers' fields of Ninguta district, Kirin Province, Manchuria.

76815. No. 384–222. *Ling tang mai.* From the Chinese farmers' fields of Ninguta district, Kirin Province, Manchuria.

76816. No. 388–2231 M. 2. Originally from the agricultural experiment station, Prerov.

76817. No. 389–2232 N–12. Originally from the agricultural experiment station, Prerov.

76818. No. 399–746. *Shrube N–61.* Originally from the Department of Agriculture, Praha, Czechoslovakia.

76819. No. 403–2240. *Studnicky.* Originally from the agricultural experiment station, Prerov.

76820. MEIBOMIA ADSCENDENS (Swartz) Kuntze. Fabaceae.

From Guantanu, Gold Coast, West Africa. Cuttings collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 29, 1927. Numbered May, 1928.

No. 1219. February 27, 1927. A tropical leguminous plant which forms a ground cover.

76821 to 76852. CORYLUS AVELLANA L. Betulaceae. **Filbert.**

From Weener, Hanover, Germany. Plants purchased from Herm. A. Hesse. Received May 4, 1928.

76821. *Badem Fundeck.*

76822. *Barcelloner Grosse.*

76823. *Barrs Spanishe.*

76824. *Bergers Zellernuss.*

76825. *Braunschweigische.*

76826. *Cosford Verbesserte.*

76827. *Einzeltragende Kegelformige.*

76828. *Englische Zellernuss.*

76829. *Fruchtbare.*

76830. *Frühe lange Zellernuss.*

76831. *Frühe von Frauendorf.*

76832. *Gekräuselte Nuss.*

76833. *Grandis.*

76834. *Grosse bunte Zellernuss.*

76835. *Lucas Zellernuss.*

76836. *Jeves Samling.*

76837. *Kaiserliche.*

76838. *Königlische Prinzessin.*

76839. *Lambert Kols.*

76840. *Längliche Riesennuss Zar schallige.*

76841. *Louisens Zellernuss.*

76842. *Messmers Zellernuss.*

76843. *Rotblättrige Lambertnuss.*

76844. *Rudolphs.*

76845. *Schlesierin.*

76846. *Sicilische.*

76847. *Spanische Lambertnuss.*

76848. *Sterms breite Zellernuss.*

76849. *Trapezunter Kaiser Hazel.*

76850. *Von Mehl.*

76851. *Wallys grosse Zellernuss.*

76852. *Waterloo.*

76853 to 76870.

From Melbourne, Victoria, Australia. Seeds presented by F. J. Rae, Director of the Melbourne Botanic Gardens. Received April 26, 1928.

76853 to 76858. ACACIA spp. Mimosaceae.

76853. ACACIA ACCOLA Maiden and Betche.

An erect bushy Australian shrub 6 to 8 feet high, with linear, slightly curved phyllodes 3 to 5 inches long and small heads of flowers in racemes 2 inches long.

For previous introduction see No. 75576.

76854. ACACIA DECURRENS Willd.

Variety *normalis.* A variety of the green wattle with sepals as long as the petals. The typical form is a handsome tree with light-green feathery foliage and bright-yellow flowers.

For previous introduction see No 75536.

76855. ACACIA LINFOLIA PROMINENS Moore (*A. fimbriata* A. Cunn.).

An unarmed Australian shrub 12 to 18 feet high, with narrow phyllodes and small globular heads of yellow flowers in rameces.

For previous introduction see No. 75540.

76853 to 76870—Continued.

76856. ACACIA MYRTIFOLIA Willd.

A tall Australian shrub with angular branchlets and ovate phyllodes edged with pink, and heads of rather large yellow flowers in racemes.

For previous introduction see No. 56573.

76857. ACACIA NERIIFOLIA A. Cunn. (*A iteaphylla* F. Muell.). **Bald acacia.**

A handsome eastern Australian tree up to 50 feet high, with linear phyllodes and simple racemes of small globular heads of yellow flowers.

For previous introduction see No. 75541.

76858. ACACIA TERMINALIS (Salisb.) Macbride (*A. elata* A. Cunn.).

An Australian tree up to 60 feet high, with golden pubescent branchlets, pinnately compound leaves, and globular heads of yellow flowers in clusters 6 inches long.

For previous introduction see No. 56559.

76859. BACKHOUSIA MYRTIFOLIA Hook. and Harv. Myrtaceae.

A tall shrub or small tree, native to Australia, with opposite ovate acuminate leaves 2 inches long and small cymes of white flowers forming terminal panicles.

76860. BOLUSANTHUS SPECIOSUS (Bolus) Harms (*Lonchocarpus speciosus* Bolus). Fabaceae.

For previous introduction and description see No. 76776.

76861. CALLISTEMON PHOENICEUS Lindl. Myrtaceae.

A tall Australian shrub with narrowly lanceolate leaves 2 to 4 inches long and spikes of large flowers with rich-red stamens.

76862. CHORIZEMA CORDATUM Lindl. Fabaceae.

An Australian shrub with weak slender branches, cordate leaves 1 to 2 inches long, and axillary and terminal racemes of orange-red flowers. It is propagated from cuttings and may be grown in the open in southern California and southern Florida, being excellent for training on pillars and trellises. In colder regions it is an attractive plant for the cool greenhouse.

For previous introduction see No. 75552.

76863. CLIANTHUS DAMPIERI A. Cunn. (*C. speciosus* Don). Fabaceae. **Glory pea.**

An Australian semishrubby perennial 2 to 4 feet high, with ascending or procumbent branches covered with long soft hairs. The compound leaves are made up of 15 to 21 obovate leaflets an inch long; and the flowers, four to six in pendent racemes, are 3 inches long and crimson or scarlet with a handsome purple-black spot at the center.

76864. DORYANTHES PALMERI W. Hill. Amaryllidaceae. **Giant spearlily.**

An agavelike Australian plant with sword-shaped leaves 8 feet long and a tall flower stem, the upper 3 feet developing into a panicle of bright-red flowers which are whitish inside.

For previous introduction see No. 51063.

76865. ERYTHROPHLOEUM CHLOROSTACHYS Baill. (*E. laboucherii* F. Muell.). Caesalpiniaceae.

An unarmed Australian tree with pinnately compound leaves of two or three pairs of obliquely obovate leaflets 2 inches long, dense spikes of small greenish flowers, and broad flat pods 6 inches long and 1 to 2 inches broad.

76853 to 76870—Continued.

76866 to 76868. EUCALYPTUS spp. Myrtaceae.

76866. EUCALYPTUS BEHRIANA F. Muell.

A tall shrub or small tree, native to Australia, with smooth thick ovate leaves 3 inches long, axillary and terminal panicles of small flowers, and very small flat-topped ovoid fruits.

For previous introduction see No. 75616.

76867. EUCALYPTUS GRANDIS W. Hill. **Flooded gum.**

An Australian tree 90 to 140 feet high, with narrowly lanceolate leaves 4 to 6 inches long, small clusters of flowers, and conical fruits. The timber is excellent for shipbuilding and general carpenter work.

76868. EUCALYPTUS PATENS Benth.

An Australian tree attaining a height of 100 feet and a diameter of 6 feet, with lanceolate falcate leaves 3 to 6 inches long, short panicles of small flowers, and globular flat-topped fruits. The tough durable timber is used by wheelwrights.

For previous introduction see No. 48995.

76869. TRISTANIA CONFERTA R. Br. Myrtaceae. **Brisbane-box.**

An Australian tree with lanceolate evergreen leaves 3 to 6 inches long, clustered at the ends of the branches, and cymes of rather large white flowers. The strong durable timber is used for building bridges, wharves, and ships.

For previous introduction see No. 75573.

76870. TRISTANIA LAURINA (J. E. Smith) R. Br. Myrtaceae.

A tall tree, native to Australia, with elliptical leaves 2 to 4 inches long and axillary clusters of small yellow flowers.

For previous introduction see No. 75574.

76871. CERATONIA SILIQUA L. Caesalpiniaceae. **Carob.**

From Bari, Italy. Plants presented by Dr. E. Pantanelli, Director of the Stazione Agraria Sperimentale, through Homer M. Byington, American consul general, Naples. Received May 13, 1926. Numbered May, 1928.

Amele. This is considered the best variety of carob cultivated in Bari Province. It may be the kind with large sweet pods which have been reported from this region.

For previous introduction see No. 55727.

76872. CERATONIA SILIQUA L. Caesalpiniaceae. **Carob.**

From the island of Cyprus. Plants presented by the director of agriculture. Received September 22, 1926. Numbered May, 1928.

Variety *Tylliria.*

76873. LANSIUM DOMESTICUM Jack. Meliaceae. **Langsat.**

From Karangpandan, Java. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received June 18, 1926. Numbered May, 1928.

No. 771. May 8, 1926. *Makoe Negoro.* A sweet thick-skinned variety growing in the garden of a Javanese prince.

76874. (Undetermined.)

From China. Roots collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received April 2, 1926. Numbered May, 1928.

No. 390. January 17, 1926. A liliaceous herb whose spreading panicles of dry seed pods promise an attractive ornamental. The flowers, about an inch long, are borne in clusters several inches long. This variety was found on the grass-covered mountain side of Kongshan.

76875 to 76877.

From Ceylon and Singapore, Straits Settlements. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received February and July, 1926. Numbered May, 1928.

76875. UVARIA PURPUREA Blume. Annonaceae.

No. 825. Botanic Gardens, Singapore, May 31, 1926. Plants of an ornamental tropical climber with very handsome purple-red flowers.

76876. VATERIA ACUMINATA Hayne. Dipterocarpaceae.

No. 321. Seeds obtained from a native en route to Kurunegala, Ceylon. The *Hal* tree of Ceylon, according to Trimen's Flora of Ceylon, is often planted for ornament. It is a large tree with a spreading crown and bears cream-colored sweet-scented flowers, an inch in diameter, during April and May. The stem yields a clear yellowish resin which is equal to the best dammar, and the seeds are ground into meal and eaten. Many trees are killed by being stripped for the bark, which is used to check the fermentation of palm wine or toddy.

76877. ARTOCARPUS LAKOOCHA Roxb. Moraceae.

No. 284. Peradeniya Garden, Ceylon, January 4, 1926. *Kana-gona* or *Tampang-manis*. Seeds of a handsome tropical Asiatic tree with deep-green leaves and yellowish green, very sour fruits 2 inches in diameter. The fruits are edible and are good for stewing.

For previous introduction see No. 47833.

76878 to 76885.

From Buenos Aires, Argentina. Seeds presented by Prof. Lorenzo R. Parodi, of the University of Buenos Aires, through H. N. Vinall, Bureau of Plant Industry. Received May 4, 1928.

76878. AVENA SCABRIVALVIS Trin. Poaceae. **Grass.**

A bulbiferous plant, with cleistogamous flowers, growing in humid places.

76879. BROMUS BREVIS Steud. Poaceae. **Bromegrass.**

A perennial from La Plata, Buenos Aires Province; collected in January, 1928.

76880 and 76881. BROMUS UNIOLOIDES (Willd.) H. B. K. Poaceae. **Bromegrass.**

An annual or biennial grass, 1 to 2 feet high, native to South America; it has been cultivated occasionally in the southern United States for winter forage.

For previous introduction see No. 62064.

76880. No. 1. A common form cultivated on pampas.

76881. No. 2. A perennial from Rio Negro, Patagonia.

76882. MELICA SARMENTOSA Ness. Poaceae. **Grass.**

A perennial somewhat climbing grass.

76878 to 76885—Continued.

76883. ORYZA SUBULATA Nees. Poaceae. **Grass.**

From Chaco, Argentina. A perennial cultivated in the botanic garden of the university.

76884. PHALARIS COERULESCENS Desf. Poaceae. **Grass.**

A cespitose perennial cultivated in the botanic garden of the university. It seeds poorly in Buenos Aires.

For previous introduction see No. 46955.

76885. POA BONARIENSIS (Lam.) Kunth. Poaceae. **Grass.**

From Avellaneda, Province of Buenos Aires. A rhizomatous perennial.

76886 to 76891.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, of the Plant Introduction Garden. Received May 7, 1928.

76886. APHELANDRA SINCLAIRIANA Nees. Acanthaceae.

A shrub 6 to 15 feet high, native to Panama, with obovate entire leaves, vivid orange-red bracts, and pale or purplish red tubular flowers.

76887. ARRABIDAEA ROTUNDATA Bur. Bignoniaceae.

A large woody vine native to the Pacific slope in Panama, with two or three elliptic leaflets and axillary and terminal panicles of very showy pink or purple flowers.

76888. CALLICHLAMYS LATIFOLIA Schum. Bignoniaceae.

A large woody vine, native to Panama, with large compound leaves having three elliptic leaflets, and short racemes of bright-yellow flowers.

76889. ODONTADENIA SPECIOSA Benth. Apocynaceae.

A large woody tropical American vine with opposite elliptic leaves 5 to 10 inches long, and large cymes of yellow flowers.

76890. POGONOPUS SPECIOSUS (Jacq.) Schum. Rubiaceae.

A tropical American shrub or small tree up to 20 feet high, with broadly lanceolate leaves, and broad cymes of scarlet flowers with brilliant red bracts.

For previous introduction see No. 45360.

76891. POSOQUERIA LATIFOLIA Roem. and Schult. Rubiaceae.

A tall Brazilian shrub up to 25 feet high, with large opposite ovate coriaceous leaves, terminal corymbs of white tubular flowers 4 inches long, and succulent edible fruits used for jellies and marmalades.

For previous introduction see No. 69373.

76892 to 76914.

From Gangtok, Sikkim, India. Seeds presented by the forest manager of Sikkim. Received May 15, 1928.

76892. ABELMOSCHUS MANIHOT (L.) Medic. (*Hibiscus manihot* L.). Malvaceae.

A Chinese perennial herb up to 9 feet high, naturalized in India and also in the Southern United States. It has palmately divided leaves and pale yellow flowers 4 to 9 inches across.

For previous introduction see No. 40030.

76892 to 76914—Continued.

76893. ALLAMANDA CATHARTICA L. Apocynaceae.

A tropical American climbing shrub with whorls of three or four obovate leaves 8 inches long and clusters of bright-yellow trumpet-shaped flowers expanding to 4 inches across.

76894. ARGYREIA sp. Convolvulaceae. **Silver weed.**

A silvery leaved climber native to India. The flowers resemble those of the morning-glory.

76895. ARTEMISIA VULGARIS L. Asteraceae. **Mugwort.**

An aromatic shrublike herb 6 to 8 feet high, with pinnately divided leaves and large panicles of small flower heads. Native throughout the mountainous parts of India.

For previous introduction see No. 67634.

76896. ASPARAGUS RACEMOSUS Willd. Convallariaceae.

A tall spiny climbing woody asparagus with many branches, falcate channeled cladodes, and racemes 1 to 2 inches long followed by berries one-fourth of an inch in diameter. It is native to the slopes of the Himalayas up to 4,000 feet altitude.

76897. BERBERIS sp. Berberidaceae. **Barberry.**

A Himalayan shrub with yellow flowers, growing at an altitude of 9,000 to 10,000 feet.

76898. BUCKLANDIA POPULNEA R. Br. Hamamelidaceae.

A large evergreen tree, native to the eastern Himalayas, which grows to a height of 80 feet. The dark-green leaves are broadly triangular, and the yellow flowers are in globose heads.

For previous introduction see No. 61598.

76899. COSTUS SPECIOSUS (Koen.) J. E. Smith. Zinziberaceae.

An East Indian perennial herb from a tuberous rootstock with a stem 4 to 10 feet high, bearing oblanceolate leaves a foot long, red bracts, and large flowers with a flowering white limb and a yellow center in a long dense spike.

For previous introduction see No. 47877.

76900. CUPRESSUS FUNEBRIS Endl. Pinaceae. **Mourning cypress.**

A very graceful evergreen tree native to China, growing at altitudes of 5,000 to 7,000 feet.

For previous introduction see No. 70974.

76901. HEDYCHIUM sp. Zinziberaceae. **Gingerlily.**

These are strong-growing tropical herbaceous perennials with ornamental leaves and white, red, or yellow flowers. The shipment is a mixture of different species.

76902. LILIUM GIGANTEUM Wall. Liliaceae. **Giant lily.**

A Himalayan lily with bulbs which grow close to the surface, in rich black mold, at altitudes of 7,500 to 9,000 feet, where it is covered with snow from November to April. The plants are 6 to 9 feet high, and the smooth hollow stems are used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large fragrant white flowers, 12 to a raceme, the perianth tube is slightly greenish, and the inner surfaces of the segments are tinged with deep purple.

For previous introduction see No. 76020.

76892 to 76914—Continued.

76903. LUCULIA GRATISSIMA (Wall.) Sweet. Rubiaceae.

A Himalayan shrub up to 15 feet high, growing at altitudes of 4,000 to 5,000 feet, with opposite ovate leaves 6 inches long and gorgeous rounded panicles of pink or rose flowers.

For previous introduction see No. 75963.

76904 and 76905. MECONOPSIS spp. Papaveraceae.

Poppylike herbaceous plants with large flowers borne singly or in panicles.

76904. MECONOPSIS sp.

A blue-flowered variety.

76905. MECONOPSIS sp.

A yellow-flowered variety.

76906. MIMOSA RUBICAULIS Lam. Mimosaceae.

A spiny Indian shrub or small tree growing up to 5,000 feet altitude. The thin finely pinnate leaves and reddish yellow flower heads make the shrub of possible value as an ornamental in the warmest parts of the United States. It is also said to make a good hedge.

For previous introduction see No. 68340.

76907. OXYSPORA PANICULATA (D. Don) DC. Melastomaceae.

A large spreading Himalayan shrub with opposite ovate leaves 5 inches long, and large loose panicles of rose-purple flowers.

For previous introduction see No. 47748.

76908. PRUNUS CERASOIDES D. Don (*P. puddum* Roxb.). Amygdalaceae. **Sikkim cherry.**

A Himalayan tree of medium size, growing at altitudes of 4,000 to 7,000 feet, with rosy or nearly white flowers and small oblong fruits with scanty flesh. The handsomely mottled wood is used for making canes and furniture.

For previous introduction see No. 65264.

76909 to 76913. RHODODENDRON spp. Ericaceae.

76909. RHODODENDRON ARBOREUM J. E. Smith.

A tall Himalayan shrub or small tree up to 40 feet high, growing at altitudes of 5,000 to 10,000 feet. It is variable both in its foliage and in the color of its flowers. In one form the leaves are silvery on the lower surface, while in another they are covered with a brownish red down. The bell-shaped flowers, borne in dense trusses, vary from deep crimson to pure white.

For previous introduction see No. 67938.

76910. RHODODENDRON CAMPANULATUM WALLICHII Hook. f.

A Himalayan shrub 15 feet high, growing at an altitude of 10,000 feet. The elliptic leaves, 4 to 6 inches long, are on red petioles, and the bright rosy purple unspotted flowers, 2 inches across, are in clusters.

76911. RHODODENDRON THOMSONII Hook. f.

A Himalayan shrub up to 15 feet high, growing at altitudes of 10,000 to 11,000 feet, with glabrous obovate leaves 3 inches long and clusters of six to eight deep blood-red flowers 2 inches across.

For previous introduction see No. 58929.

76912. RHODODENDRON WIGHTII Hook. f.

A Himalayan shrub 14 feet high, growing at altitudes of 10,000 to 11,000 feet, with oblong leaves 6 to 8 inches long, brown tomentose beneath, and large clusters of red-spotted yellow flowers 2 to 3 inches across.

For previous introduction see No. 58930.

76892 to 76914—Continued.

76913. RHODODENDRON sp.

A rhododendron growing at altitudes of 10,000 to 11,000 feet.

76914. RUBUS ELLIPTICUS J. E. Smith. Rosaceae. **Raspberry.**

A very sweet Himalayan raspberry which grows at from 5,000 to 6,000 feet altitude.

For previous introduction see No. 67939.

76915 to 76918.

From Sinaloa, Mexico. Seeds presented by F. W. Smith, through Paul C. Standley, of the Field Museum of Natural History, Chicago, Ill. Received May 18, 1928.

76915. CANAVALIA GLADIATA (Jacq.) DC. Fabaceae. **Sword bean.**

A Mexican variety.

76916. CANAVALIA MARITIMA (Aubl.) Thouars. Fabaceae.

A Mexican variety.

For previous introduction see No. 65466.

76917. MAXIMILIANEA VITIFOLIA (Willd.) Krug and Urb. (*Cochlospermum hibiscoides* Kunth). Cochlospermaceae.

A Central American deciduous tree 35 feet high, but flowering when only 6 feet high. The alternate leaves have five to seven serrate lobes, and the handsome bright-yellow flowers, 4 inches across, are in terminal clusters.

For previous introduction see No. 52412.

76918. TABEBUIA sp. Bignoniaceae.

A tropical American tree with opposite palmately divided leaves and clusters of large showy flowers.

76919 and 76920.

From Richmond, Victoria, Australia. Seeds presented by F. H. Baker. Received May 19, 1928.

76919. HAKEA LAURINA R. Br. Proteaceae. **Sea-urchin hakea.**

An Australian shrub up to 30 feet high, with lanceolate leaves 6 inches long and globular heads of crimson flowers from which protrude the golden-yellow styles an inch long.

For previous introduction see No. 70908.

76920. KENNEDIA MONOPHYLLA Vent. (*Hardenbergia monophylla* Benth.). Fabaceae.

An Australian vine with single lanceolate leaflets, and terminal panicles and axillary racemes of flowers ranging from white through rose to purple.

For previous introduction see No. 55601.

76921 to 76927.

From Bussaco, Portugal. Seeds presented by José de Mello de Figueiredo, Chief Forester of the Bussaco National Forest. Received May 23, 1928.

76921. ACACIA MELANOXYLON R. Br. Mimosaceae. **Blackwood acacia.**

An Australian evergreen tree up to 100 feet high, with lanceolate leathery phyllodes 4 inches long, heads of creamy flowers in short racemes, and reddish brown twisted pods. The dark wood is very similar to black walnut and is used for the same purposes. The tree makes rapid growth while young.

For previous introduction see No. 48051.

76921 to 76927—Continued.

76922. CALLITRIS CUPRESSIFORMIS Vent. (*Frenela australis* Endl.). Pinaceae.

An Australian evergreen reaching a height of 50 feet, with slender drooping branches and globular cones.

For previous introduction see No. 73834.

76923. CALLITRIS ORLONGA L. Rich. (*Frenela gunnii* Endl.). Pinaceae.

An evergreen Tasmanian shrub or small tree 25 feet high, with erect dense branches and ovoid or oblong cones.

76924. CUPRESSUS LUSITANICA Mill. Pinaceae. **Portuguese cypress.**

An ornamental evergreen tree, native to Mexico, which is cultivated as a forest tree in Portugal. The soft aromatic straight-grained wood is considered very valuable.

For previous introduction see No. 73844.

76925. LAUROCERASUS LUSITANICA (L.) Roemer (*Prunus lusitanica* L.). Amygdalaceae. **Portugal-laurel.**

An evergreen Portuguese tree 20 feet high, with thick leathery serrate-lanceolate leaves, racemes of small white flowers, and inconspicuous black fruits.

For previous introduction see No. 62726.

76926. MYRICA FAYA Ait. Myricaceae.

An evergreen shrub or small tree up to 25 feet high, native to the Canary Islands, with lanceolate leaves 4 inches long, and elongated spikes of wine-red edible fruits one-fourth of an inch across.

For previous introduction see No. 71861.

76927. PHILLYREA LATIFOLIA L. Oleaceae.

An evergreen shrub or small tree up to 30 feet high, native to the Mediterranean region. The shining dark-green ovate leaves are 2 inches long, and the racemes of small flowers are followed by black fruits one-fourth of an inch in diameter.

76928. ZEPHYRANTHES sp. Amaryllidaceae. **Zephyrlily.**

From Piste, Yucatan, Mexico. Bulbs collected by E. L. Crandall, Bureau of Plant Industry. Received June 28, 1927. Numbered June, 1928. A yellow-flowered tender bulbous plant.

76929. RHEUM RHAPONTICUM L. Polygonaceae. **Rhubarb.**

From Ottawa, Canada. Roots presented by T. F. Ritchie, Division of Horticulture, Central Experimental Farm. Received May 25, 1928.

Ruby. A Canadian variety.

76930. CLERODENDRUM FOETIDUM Bunge. Verbenaceae. **Rose glorybower.**

From Nikita, Yalta, Crimea, Russia. Plants presented by George V. Heintz, librarian, Government Botanic Garden. Received May 24, 1928.

A semihardy evergreen Chinese shrub 6 feet high, with cordate leaves 8 inches long, and dense capitate cymes of fragrant rosy red flowers. When killed to the ground the young shoots bloom in the autumn of the same season.

For previous introduction see No. 73424.

76931 to 76967.

From Melbourne, Australia, and Tasmania. Seeds presented by Mrs. Frieda Cobb Blanchard, University of Michigan, Ann Arbor, Mich. Received May 24, 1928.

Nos. 76931 to 76949 were received from Melbourne, Australia.

76931. ANIGOZANTHOS FLAVIDA Red. Amaryllidaceae.

A herbaceous perennial, native to Western Australia, with a thick underground stem, linear radical leaves 1 to 2 feet long, and a 4-foot stalk bearing a much-branched panicle of tubular flowers. The flowers and stems of the panicle are covered with a greenish red wool.

76932. BACKHOUSIA MYRTIFOLIA Hook. and Harv. Myrtaceae.

For previous introduction and description see No. 76859.

76933. CALLICOMA SERRATIFOLIA Andrews. Cunoniaceae.

A tall Australian shrub or tree up to 40 feet high, with opposite coarsely serrate-ovate leaves 4 inches long, white or rusty underneath, and dense globular heads of small flowers in terminal panicles.

76934. CALLISTEMON PHOENICEUS Lindl. Myrtaceae.

For previous introduction and description see No. 76861.

76935. CALLISTEMON RIGIDUS R. Br. (*C. rugulosus* DC.). Myrtaceae.

A tall shrub, sometimes 30 feet high, native to New South Wales. The leaves, 2 to 5 inches long, are narrowly linear, and the red flowers, with dark-red stamens an inch long, are borne in large dense spikes.

For previous introduction see No. 75549.

76936. CORREA BAUERLENII F. Muell. Rutaceae.

An Australian shrub which has branchlets covered with dark-brown hairs, opposite lanceolate thin leaves, pale beneath, and yellowish green tubular flowers in the axils.

For previous introduction see No. 75553.

76937. DRACOPHYLLUM SECUNDUM R. Br. Epacridaceae.

An Australian shrub resembling a monocot with the branching stems covered by the sheathing bases of the linear striated leaves 2 to 4 inches long. The branches are terminated by long compound 1-sided racemes of pure white tubular flowers.

76938. EUGENIA AUSTRALIS Wendl. (*E. myrtifolia* Sims). Myrtaceae.

Australian brush-cherry.

An Australian tree up to 80 feet high, with ovate-evergreen leaves 3 inches long, branching panicles of white flowers an inch across, and ovoid reddish edible fruits an inch long.

For previous introduction see No. 48670.

76939. LASIOPETALUM DASYPHYLLUM Sieber. Sterculiaceae.

A tall Tasmanian shrub with rusty tomentose branches, coriaceous cordate to lanceolate leaves 4 inches long, and dense axillary clusters of small brownish flowers.

76940. MELALEUCA STYPHELIOIDES J. E. Smith. Myrtaceae.

A tall Australian tree, sometimes 80 feet high, with thick spongy bark. The leaves are very small, and the small creamy white flowers are in dense spikes about 2 inches long.

For previous introduction see No. 75567.

76931 to 76967—Continued.

76941. OXYLOBIUM LANCEOLATUM (Vent.) Druce (*Callistachys lanceolata* Vent.). Fabaceae.

A tall Australian shrub with whorls of lanceolate leaves 3 to 5 inches long and yellow flowers in dense terminal racemes 6 inches long.

For previous introduction see No. 75569.

76942. PITTOSPORUM UNDULATUM Vent. Pittosporaceae. **Orange pittosporum.**

An Australian evergreen shrub or tree up to 40 feet high, often used as a hedge. The lanceolate leaves, 3 to 6 inches long, are undulate on the margins, and the very fragrant white flowers are in terminal clusters.

76943. PROSTANTHERA NIVEA A. Cunn. Menthaceae.

A beautiful Australian shrub 6 feet high, with linear terete leaves an inch long and snow-white or pale-blue axillary flowers, the terminal ones forming leafy racemes.

76944. STENOCARPUS SALIGNUS R. Br. Proteaceae.

A moderate-sized Australian tree with leaves varying from ovate to pinnatifid, 2 to 4 inches long, and axillary and terminal umbels of small yellow flowers.

76945. SWAINSONA GALEGIFOLIA (Andrews) R. Br. (*S. coronillaefolia* Salisb.). Fabaceae. **Darling pea.**

An Australian subshrub climbing to a height of several feet with 11 to 21 small oblong leaflets and large deep-red, pink or white flowers. *Swainsona coronillaefolia* probably represents the horticultural variety *violacea*, which has rose-violet flowers. This species is said to be poisonous to stock.

76946. TRICONDYLUS FRASERI (R. Br.) Kuntze (*Lomatia fraseri* R. Br.). Proteaceae.

An Australian shrub or small tree with lanceolate irregularly lobed leaves and loose cymes of white or yellow flowers. The light hard wood has beautiful markings and is easily worked.

For previous introduction see No. 51068.

76947. TRISTANIA CONFERTA R. Br. Myrtaceae. **Brisbane-box.**

For previous introduction and description see No. 76869.

76948. TRISTANIA LAURINA (J. E. Smith) R. Br. Myrtaceae.

For previous introduction and description see No. 76870.

76949. VIMINARIA DENUDATA J. E. Smith. Fabaceae.

An Australian shrub with rushlike stems up to 20 feet high, long wiry pendulous branches, leaves reduced to filiform petioles 6 to 9 inches long, and long terminal racemes of orange-yellow flowers.

Nos. 76950 to 76967 were received from Tasmania.

76950. ASTELIA ALPINA R. Br. Liliaceae.

No. 138. From Cradle Valley.

For previous introduction and description see No. 76703.

76951 to 76953. BELLENDENA MONTANA R. Br. Proteaceae.

No. 145. From Middlesex. A small Tasmanian shrub growing at an altitude of 2,000 feet. It is about a foot high with obovate leaves an inch long, 3-lobed at the tip, and small white or pink flowers in dense terminal racemes,

76931 to 76967—Continued.

followed by flat membranous fruits half an inch long.

For previous introduction see No. 67806.

76951. An orange-fruited variety.

76952. A red-fruited variety.

76953. A yellow-fruited variety.

76954. BILLARDIERA LONGIFLORA Labill. Pittosporaceae.

No. 146. From Middlesex. A Tasmanian twining shrub with oval to linear leaves an inch long, solitary pendulous dull-yellow or blue flowers as long as the leaves, and pendent, bright-purple berries nearly an inch in diameter. The shrub is very dainty and slender, with sparse foliage. It grows in sunshine or in partial shade at an altitude of 2,000 feet.

For previous introduction see No. 64597.

76955 to 76957. COPROSMA BILLARDIERI (A. Rich.) Hook. f. Rubiaceae.

An erect slender-branching Tasmanian shrub several feet high with the branchlets often reduced to spines. The lanceolate leaves are less than half an inch long, and the small solitary tubular flowers are followed by broadly oblong berries.

76955. No. 133. From Cradle Valley. A variety growing at an altitude of 3,000 feet.

76956. No. 143. From Middlesex. An orange-berried variety growing at an altitude of 3,000 feet.

76957. No. 144. From Middlesex. A red-berried variety growing at an altitude of 2,000 feet.

76958. COPROSMA MOOREI Rodway. Rubiaceae.

No. 129. From Cradle Valley. A small prostrate creeping perennial, native to Tasmania, found at an altitude of 3,000 feet. It has thick shining ovate leaves, small solitary flowers, and broadly ovoid blue berries less than half an inch long.

76959. DIANELLA TASMANICA Hook. f. Liliaceae.

No. 51. From National Park.

For previous introduction and description see No. 76711.

76960 and 76961. DRIMYS LANCEOLATA (Poir.) Baill. (*D. aromatica* F. Muell.). Magnoliaceae.

A bushy Australian shrub or small tree up to 30 feet high, with alternate oblong leaves 1 to 3 inches long, clusters of small flowers, and strongly aromatic black fruits the size of a pea.

For previous introduction see No. 67813.

76960. No. 130. From Cradle Valley. A variety growing at an altitude of 3,000 feet.

76961. No. 147. From Middlesex. A variety growing at an altitude of 2,000 feet.

76962. GAULTHERIA HISPIDA R. Br. Ericaceae.

No. 148. From Middlesex. A Tasmanian shrub, 2 to 6 feet high, growing at an altitude of 2,000 feet. The branches are covered with coarse brown hairs, the obscurely toothed lanceolate leaves are 2 inches long, and the dense terminal racemes of small flowers are followed by white berries.

For previous introduction see No. 67818.

76963. PENTACHONDRA PUMILA (Forst.) R. Br. Epacridaceae.

No. 131. From Cradle Valley.

For previous introduction and description see No. 76718.

76931 to 76967—Continued.

76964. PERNETTYA TASMANICA Hook. f. Ericaceae.

No. 142. Near Cradle Valley. A densely matted creeping Tasmanian shrub with concave lanceolate leaves one-fourth inch long, small urn-shaped flowers in the upper axils, and red or yellow berries one-fourth inch in diameter.

76965. PIMELEA DRUPACEA Labill. Thymelaeaceae.

No. 149. From Middlesex.

For previous introduction and description see No. 76720.

76966. TROCHOCARPA GUNNII (Hook. f.) Benth. Epacridaceae.

No. 132. From Cradle Valley. A tall, densely branched Tasmanian shrub, 10 to 12 feet high, growing at an altitude of 3,000 feet. It has small oblong leaves, clusters of white flowers, and globular purple, violet, or orange fruits one-fourth inch in diameter.

76967. (Undetermined.)

No. 161. From Middlesex. A shrub growing at an altitude of about 2,000 feet.

76968 to 76997. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Sydney, New South Wales, Australia. Seeds obtained from the Lindley-Walker Wheat Co., through J. W. T. Duvel, Grain Futures Administration, United States Department of Agriculture. Received June 18, 1927. Numbered June, 1928.

76968. *Aussie.*

76969. *Baroota Wonder.*

76970. *Bena.*

76971. *Billy Hughes.*

76972. *Bobs.*

76973. *Bomen.*

76974. *Bruce.*

76975. *Canberra.*

76976. *Carriban.*

76977. *Cedar.*

76978. *Clarendon.*

76979. *Comeback.*

76980. *Defiance.*

76981. *Federation.*

76982. *Florence.*

76983. *Greshley.*

76984. *Hard Federation.*

76985. *Indian Pusa.*

76986. *Major.*

76987. *Marshall No. 3.*

76988. *Minister.*

76989. *Moira.*

76990. *Petatz Surprise.*

76991. *Pusa No. 4.*

76992. *Pusa No. 7.*

76993. *Quality.*

76994. *Turvey.*

76995. *Waratah.*

76996. *Yandilla King.*

76997. *No. 4–P.*

76998 and 76999. FRAGARIA spp. Rosaceae. **Strawberry.**

From Milan, Italy. Plants presented by Dr. Piero Scotti Foglieni. Received April 20, 1928.

76998. FRAGARIA sp.

No. 63. *White pineapple.* In Italy this variety gave origin to the everbearing strawberries with large fruits. The plant is vigorous, and the flesh-colored berry is the most savory one of its type; not everbearing, but with some flowers also during the summer.

76999. FRAGARIA sp.

No. 135 or 107. Of unique characteristic shape, resembling an ornamental pumpkin or a flask. Exquisite, large fruit.

77000 to 77014. Poaceae **Bamboo.**

From China. Plants collected by F. A. McClure, agricultural explorer, Bureau of Plant Industry. Received June 24, 1927. Numbered June, 1928.

77000. PHYLLOSTACHYS sp.

No. 705. Kwangtung Province.

77001. PHYLLOSTACHYS sp.

No. 706. Taaihohhan, Anhwei Province, October 22, 1926. *Wongtun chuk.* A small bamboo, possibly a Phyllostachys, used in weaving baskets. The culms are flattened above the branches which are borne in pairs. The young shoots are eaten.

77002. (Undetermined.)

No. 708. Shuching, Anhwei Province, October 14, 1926. *Fa taan chuk.* A small bamboo with thin, tough walls, characterized by their very dark green color. It is used in weaving and is considered good for this purpose, especially on account of the low percentage of waste material. The young shoots are eaten with great relish.

77003. PHYLLOSTACHYS sp.

No. 716. Rhizomes, with small plants attached to them, obtained at Chiuhwashaan, Anhwei Province, November 4, 1926. *Kwai chuk.* A medium-sized bamboo of the monopodial type cultivated, or rather half cultivated, for the edible young shoots, and the culms which are used in weaving baskets, trays, etc.

77004. ARUNDINARIA sp.

No. 718. November 3, 1926. *Koo chuk.* Rhizomes, with young plants attached to them, obtained at Chiuhwashaan, Anhwei Province, where this occurs spontaneously. It is a medium-sized monopodial bamboo 4 or 5 meters high and 2 centimeters in diamater. The culms, purplish green, especially when young, are thick-walled; the pith is chambered, the diaphram occurring about every 3 centimeters. The nodes are prominent, the branches three to usually five, acutely ascending, the middle the largest. The medium-sized drooping leaves are long and slender. The rhizomes are cylindrical, and the nodes not prominent, in which characteristic they resemble the rhizomes of Arundinarias. This bamboo is common, but not used to any great extent, and the shoots are not edible.

77005. PHYLLOSTACHYS NIDULARIA Munro.

No. 720. November 4, 1926. *Shui chuk.* Rhizomes, with small plants attached, obtained at Chiuhwashaan, Anhwei Province. A small wild bamboo of monopodial type, apparently of wide distribution, and very commonly seen in flower. The culms, 1.5 to 3 meters high and 1 to 1.5 centimeters in diameter, are somewhat flattened and are used in weaving. There are two branches, and the leaves are small. The young shoots are edible.

77000 to 77014—Continued.

77006. PHYLLOSTACHYS sp.

No. 721.

77007. PHYLLOSTACHYS sp.

No. 722. November 3, 1926. *Lo chuk.* Rhizomes, with small plants attached to them, obtained at Chiuhwashaan, Anhwei Province. A medium-sized bamboo found both cultivated and wild. It is 4 to 6 meters high and 2 to 2.5 centimeters in diameter, with rather prominent nodes and medium-short internodes. The young shoots are edible, and the culms are used in weaving and making native lanterns.

77008. ARUNDINARIA sp.

No. 725. November 3, 1926. *Shat sam chuk, mah chuk.* Rhizomes, with small plants attached to them, obtained at Chiuhwashaan, Anhwei Province. A medium-sized wild bamboo 4 to 4.5 meters high and 1.5 to 2 centimeters in diameter, with edible shoots. The culms are nearly solid with very small central chambers; they are used for walking sticks, whipsticks, etc., but not for weaving. The nodes are prominent, the branches, two at each node, are unequal, and the leaves are small to medium sized.

77009. PHYLLOSTACHYS sp.

No. 726. November 3, 1926. *Liu kin chuk.* Rhizomes, with small plants attached to them, obtained at Chiuhwashaan, Anhwei Province. A small, monopodial bamboo found wild in this region. It is characterized by large drooping leaves, few branches, nearly equal, rising at a sharp angle with the stiff cylindrical culm. Nodes not prominent, buds very flat, and indentation slight. Culms thick-walled, with small central cavity containing very little pith. Culm sheaths thin, tips ephemeral, but the bases cling rather tenaciously. Rhizomes hard, brittle, shiny, light brown when mature. Roots few and very stiff. There are many nodes of the rhizomes without buds.

77010. ARUNDINARIA sp.

No. 729. October 23, 1926. *Liu chuk.* Rhizomes, with small plants attached to them, obtained at Taaihohhan, Anhwei Province. A small, monopodial bamboo with stiff, cylindrical, upright thick-walled culms, large drooping leaves, and numerous small branches which are acutely ascending. The culms are used as the source of sticks for hanging up noodles. Their smoothness and stiffness fits them for this purpose. The young shoots are not eaten.

77011. PHYLLOSTACHYS sp.

No. 885. Nanking. November 22, 1926. *Fa chua, ting chaa chow.* Sweet edible shoots which appear in May. Culms used for weaving baskets, etc., cut when 1 or 2 years old; yellow when mature. Rhizomes dark in color.

77012. BAMBUSA ANGULATA Munro.

No. 1052. Yunghui, Kwangsai. November, 1926. *Szfong chuk* (square bamboo). A rare monopodial bamboo cultivated in pots. It is distinguished from other Chinese bamboos by the following characteristics: Stems squarish in cross section; lower nodes of the culms bear short spines, other nodes unarmed; nodes of the branches prominent because they are rather conspicuously larger than those of other bamboos; leaves more or less distinguishable by their long, narrow, straight-sided, slender-tapered tips. This bamboo is the center of more curious interest than commercial value. The culms may reach a height of 4 meters and a diameter of 1.5 to 2 centimeters. The walls are not very thick, and the culms are not strong, seeming to lack the proper amount of tough fiber. This bamboo is used in making walking-sticks.

77000 to 77014—Continued.

77013. BAMBUSA sp.

No. 1053. *Fat t'o chuk* (Buddha's belly bamboo). A small bamboo of the sympodial type obtained at a Chinese nursery at Canton. It is cultivated in pots for ornamental purposes only. This supposed ornamental value is derived from the globular internodes which make up a zigzag culm. It does not appear to exceed 1 meter in height and is, as a rule, only about two-thirds this high. The largest internodes are usually about 1.5 centimeters in diameter and quite short, usually about 3 centimeters long. The culm tapers rather abruptly from the base to the tip. The walls are greatly thickened, the inner cavity of the internodes being flat in shape, barely wide enough to accommodate a small knife blade. The branching is of the type in which there is one large central branch and two smaller ones on either side of it. There may also be other smaller branches between these. The apparently abnormal growth of the internodes may be due to the presence of fungal threads in the young shoots, a circumstance which may lend credence to the theory that the black spore masses of some smut sometimes appear at the bases of the branches; that is, at the nodes of the culms.

77014. (Undetermined.)

No. 1054. Lingnan University, Canton, May 20, 1927. *Koon yam chuk* (goddess-of-mercy bamboo). A small bamboo of the sympodial type which grows in very dense clumps. The culms will reach a length of 2 or 3 meters if allowed to grow unmolested and a diameter of about 1 centimeter. Typically the leaves are extremely small, 2 to 3 centimeters in length, and the tips of the branchlets which bear the leaves curl downward in a very characteristic manner. This bamboo is usually used as a hedge plant, though it is sometimes grown in pots. It responds admirably to trimming, and makes very dense and beautiful hedges. It keeps its limits almost indefinitely while spreading imperceptibly.

77015 to 77019. RHODODENDRON spp. Ericaceae.

From Leicester, England. Seeds purchased from Rev. J. Farnworth Anderson. Received June 16, 1928.

77015. RHODODENDRON AMBIGUUM Hemsl.

A low Chinese shrub with lanceolate leaves 2 to 3 inches long; the flowers, pale-yellow spotted with greenish yellow, are 2 inches across.

77016. RHODODENDRON LUTESCENS Franch.

A Chinese shrub 6 feet high, with long pointed lanceolate leaves 3 to 4 inches long, densely scaly and light green beneath. The pale-yellow wheel-shaped flowers are an inch across.

77017. RHODODENDRON MAXWELLII L. S. Gibbs.

A large shrub or small tree native to North Borneo at an altitude of 6,000 feet. The medium-sized thick rugose leaves resemble those of *Rhododendron acuminatum;* the tubular yellow flowers, 2 inches in diameter, are produced abundantly in racemes.

77018. RHODODENDRON RACEMOSUM Franch.

An upright Chinese shrub about 6 feet high, with scaly branchlets, elliptic to obovate leaves which are glabrous above and glaucous beneath, and numerous few-flowered clusters of pink flowers.

77019. RHODODENDRON sp.

Forrest's No. 17827. An ornamental shrub.

77020 to 77022.

From St. Peters, South Australia. Seeds presented by J. Howard Johnson. Received June 8, 1928.

77020. ERYTHRINA CRISTA-GALLI L. Fabaceae.

An ornamental Brazilian shrub or small tree with large spikes of dark-red flowers 12 to 18 inches long.

For previous introduction see No. 73849.

77021. MIDA ACUMINATA (R. Br.) Kuntze (*Fusanus acuminatus* R. Br.). Santalaceae. **Quandong.**

An Australian evergreen tree up to 30 feet high, with long narrow leaves which are eaten by sheep and cattle in times of drought. The inconspicuous flowers are in terminal clusters and are followed by red fruits 1 to 2 inches in diameter. The fleshy part of the fruit is used for jelly, and the kernel of the nut, besides being edible, contains an oil which may be used for light.

For previous introduction see No. 50325.

77022. XANTHOCERAS SORBIFOLIA Bunge. Sapindaceae.

A Chinese shrub or small tree with ashlike leaves and large drooping racemes of white flowers with yellow stamens. The kernels of the large fruits are eaten by the Chinese.

For previous introduction see No. 62590.

77023. LILIUM sp. Liliaceae. Lily.

From Chosen, Japan. Bulbs collected by R. K. Beattie, Bureau of Plant Industry. Received June 16, 1928.

No. 685. May 16, 1928. Koryo Forest Experiment Station, about 25 miles northeast of Keijo. A species said to have pinkish flowers. The plants were about 7 inches high when these bulbs were dug. The winters in this region go below 0 F., but there is little snow.

77024 and 77025.

From Soledad, Cienfuegos, Cuba. Seeds presented by R. M. Grey, biological laboratory and botanical garden, Harvard University. Received June 12, 1928.

77024. CLUSIA ROSEA Jacq. Clusiaceae.

A Central American shrub or tree up to 30 feet high, usually epiphytic when young and eventually killing the host plant. The opposite entire broadly ovate leaves are very thick and leathery, and the large white flowers are often tinged with pink.

77025. TROPHIS RACEMOSA (L.) Urban (*T. americana* L.). Moraceae.

A Mexican tree up to 50 feet high, with ovate coriaceous leaves 4 to 7 inches long, greenish flowers, and small globose fruits which have a very thin edible flesh. The young branches are used for fodder, and the bark contains tannin.

77026. OPIZIA STOLONIFERA Presl. Poaceae. Acapulco grass.

From Habana, Cuba. Plants obtained from Brother Leon, La Salle College, through P. L. Ricker, Bureau of Plant Industry. Received February 6, 1928. Numbered June, 1928.

This perennial creeping grass was discovered 100 years ago at Acapulco, Mexico. It is now known to grow over a wide area in the western part of southern Mexico, a region with a long period of drought each year. It makes very dense turf and grows even on the surface of practically bare limestone rock. It is doubtless very drought resistant, as the dry season of southwest Mexico is a prolonged one.

77027. OPIZIA STOLONIFERA Presl. Poaceae. **Acapulco grass.**

From Cuba. Sod obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. Received February 15, 1928. Numbered June, 1928.

No. 3. February 1, 1928. A local variety obtained near Habana.

For previous introduction and description see No. 77026.

77028 to 77044. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

Japanese flowering cherry trees growing at the Plant Introduction Garden, Chico, Calif. Numbered April, 1928.

77028. Row 133, tree 4, O. T. O. Single, white-flowered form.

77029. Row 135, tree 5, O. T. O. Single, white-flowered form.

77030. Rows 144 and 145, tree 5, O. T. O. Single, white-flowered form.

77031. Rows 143 to 145, tree 4, O. T. O. *Ariake* (dawn). Tree spreading in habit, about 18 feet high; bark gray; flowers very pale pink, nearly single, 2 inches or more across, long stemmed, in clusters of two to four, blooming about midseason. The varietal name probably refers to the delicate pink tints of the flowers.

For previous introduction see No. 69080.

77032. Row 129, tree 4, O. T. O. *Gosiozakura* (palace cherry). A small spreading tree with light-brown rough bark. The semidouble flowers, produced in clusters of five, are about 1¾ inches across, white, faintly overspread with pink.

For previous introduction see No. 67951.

77033. Row 133, tree 6, O. T. O. *Gyoiko* (Imperial). A vigorous, erect tree, 12 to 14 feet high. The semidouble, greenish white flowers, the petals of which are striped darker green with occasional tinges of pink, are about 1½ inches in diameter and are produced in clusters of three to five.

For previous introduction see No. 76068.

77034. Row 150, tree 6, O. T. O. *Jonioi* (supreme fragrance). An upright tree about 17 feet high, with gray bark and bronze-colored young foliage. The single, white, fragrant flowers, about 1½ inches across, are in upright clusters of three or four.

77035 and 77036. *Kwanzan* (name refers to a Japanese mountain). Tree upright spreading in habit, becoming about 25 feet high; bark dark reddish brown; young foliage bronze green; buds rose red; flowers deep pink, double, nearly 2 inches across, in clusters of two to five, blooming late. This is considered by some horticulturists to be the finest of the double-flowering cherries, because of the deep color of the flowers.

For previous introduction see No. 76072.

77035. Row 136, tree 5, O. T. O.

77036. Rows 144 and 145, tree 6, O. T. O.

77037. Row 146, tree 6, O. T. O. *Miyako* (beauty or prosperity). Tree upright spreading, young foliage brown; buds pink; flowers light pink, semidouble, opening rather flat, pinker toward the margin with fimbriate petals in few-flowered clusters, blooming rather late.

77038. Row 147, tree 1, O. T. O. *Shiratamazakura* (white gems). Branches pale brown; young foliage brownish red; flowers single, white tinged with pale pink, 1¼ inches across, in clusters of three and four, borne in great abundance.

77028 to 77044—Continued.

77039 to 77041. *Shirofugen* (white goddess). A large spreading tree, up to 25 feet in height and spread, with brownish gray bark. The young leaves, which are dark bronze green, make a striking contrast with the pendulous clusters of large, double, light-pink flowers which become almost white before falling. This variety closely resembles *Fugenzo*, but has lighter flowers.

For previous introduction see No. 76078.

77039. Rows 138 and 139, tree 5, O. T. O.

77040. Rows 143 and 144, tree 2, O. T. O.

77041. Row 146, tree 2, O. T. O.

77042. Row 137, tree 5, O. T. O. *Takinioi* (fragrant white cascade). Tree rather small and spreading, about 15 feet high; bark brownish gray; flowers pure white, single, very fragrant, about 1½ inches across, in clusters of three or four; blooming midseason.

For previous introduction see No. 76081.

77043 and 77044. *Wasinowo* (eagle's tail). An upright tree about 20 feet high, with smooth gray bark, brownish green young foliage, and numerous single white flowers nearly 2 inches in diameter. The size and quantity of the flowers make this a very attractive form.

77043. Row 126, tree 4, O. T. O.

77044. Rows 144 and 145, tree 6, O. T. O.

77045 to 77048. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Peking, China. Seeds presented by T. T Wang, Chief of the Bureau of Agriculture and Forestry of the Ministry of Agriculture and Labor. Received June 25, 1928.

Chinese varieties which are planted the last of March in the vicinity of Peking.

77045. No. 1. 77047. No. 3.

77048. No. 2. 77048. No. 4.

77049. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture. Received June 25, 1928.

A long purple variety grown at the Singalong propagating station.

77050 and 77051.

From Munich, Bavaria, Germany. Plants presented by Dr. Karl Goebel, Director of the Munich Botanic Gardens. Received June 23, 1928.

77050. FICUS ROXBURGHII Wall. Moraceae.

For previous introduction and description see No. 76755.

77051. THUNIA ALBA (Lindl.) Reichenb. Orchidaceae.

A tropical Himalayan terrestrial orchid, 1 to 2 feet high, with bamboolike stems and leaves and four to eight flowered racemes of white to purple Cattleyalike flowers.

77052. MORAEA sp. Iridaceae.

From Kenya Colony, East Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received January 31, 1928. Numbered June, 1928.

No. 357. October 14, 1927. A blue-flowered irislike plant found in the grassland at the northern base of Mount Kenya, between Nanyuki and Meru.

77053 to 77060.

From Munich, Bavaria, Germany. Plants presented by Dr. Karl Goebel, Director of the Munich Botanic Gardens. Received June 23, 1928.

77053. CISSUS GONGYLODES (Baker) Planch. (*Vitis pterophora* Baker). Vitaceae.

A vigorous tendril-bearing Brazilian vine with 4-angled branches sending down long bright-red aerial roots. The large leaves are trifoliolate, the reddish brown flowers are in cymes opposite the leaves, and at the end of each branch is borne a tuber often 6 inches long.

77054 to 77057. DATURA spp. Solanaceae.

77054. DATURA ARBOREA L. **Floripondio.**

A small tree, native to Peru and Chile, with ovate-lanceolate leaves and large trumpet-shaped greenish white flowers.

77055. DATURA SANGUINEA Ruiz and Pav. **Red floripondio.**

A Peruvian shrub up to 12 feet high, with pubescent ovate-acuminate leaves and brilliant orange-red pendulous flowers 8 inches long.

For previous introduction see No. 52735.

77056. DATURA SANGUINOLENTA Hort.

77057. DATURA sp.

An ornamental shrub with large trumpet-shaped flowers.

77058. GUNNERA MANICATA Linden. Haloragidaceae.

A southern Brazilian herbaceous perennial, grown for the immense leaves which have stalks several feet long and blades 5 to 10 feet across, orbicular in outline with variously lobed and crenate margins.

77059. HOMALOCENCHRUS HEXANDRUS (Swartz) Kuntze (*Leersia hexandra* Swartz). Poaceae. **Rice grass.**

A very leafy Brazilian grass about 3 feet high, readily eaten by cattle.

For previous introduction see No. 47025.

77060. VITIS VOINERIANA Baltet. Vitaceae. **Grape.**

A climber with evergreen leathery leaves.

77061. DENDROCALAMUS STRICTUS (Roxb.) Nees. Poaceae. **Bamboo.**

From Dehra Dun, India. Seeds presented by R. N. Parker, forest botanist of the Forest Research Institute. Received June 29, 1928.

A strikingly beautiful and useful bamboo already grown to a considerable extent in the warmer parts of Florida, but worthy of further planting. The culms under good conditions may grow to a height of 80 to 100 feet. This bamboo will stand considerable drought and cold. It is especially suited for clump planting.

For previous introduction see No. 67508.

77062. CITRUS sp. Rutaceae.

From the island of Malta. Seeds presented by A. S. Kenerson, of the W. Atlee Burpee Co. Received June 29, 1928.

A wild orange used as a stock in Malta.

77063. DATISCA CANNABINA L. Datiscaceae.

From India. Seeds and roots presented by the curator of the industrial section of the India Museum at Calcutta. Received June 28, 1928.

A hardy herbaceous perennial up to 7 feet high, native to eastern Europe and western Asia. The odd-pinnate leaves have three pairs of deeply serrate narrowly lanceolate leaflets, and the small yellow flowers are borne in open racemes. The roots are used as a source of yellow dye.

For previous introduction see No. 74699.

77064 to 77146. RHODODENDRON spp. Ericaceae. **Azalea.**

From Japan. Cuttings collected by R. K. Beattie, Bureau of Plant Industry. Received February 20, 1928. Numbered June, 1928.

Collected at the Agricultural College, Imperial University Komaba, Tokyo, February 1, 1928.

77064. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 518. *Kirin.* A pinkish lilac Kurume.

77065. RHODODENDRON sp.

No. 519. *Hana no seki.*

77066. RHODODENDRON sp.

No. 521. *Misu no uchi.*

77067. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 522. *Shoshobeni.* Kurume; hose-in-hose; alizarine pink (Ridgway).[2]

77068. RHODODENDRON sp.

No. 523. *Man yoki.*

77069. RHODODENDRON sp.

No. 524. *Benifude.*

77070. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 525. *Miyako shibori.* A Kurume, single white, not of first quality.

77071. RHODODENDRON sp.

No. 526a. *Akebono ryukyu.*

77072. RHODODENDRON sp.

No. 527. *Mikawa murasaki.* Probably of hybrid origin; mallow purple (Ridgway) flowers about 1½ inches across.

77073. RHODODENDRON sp.

No. 528. *Shikizaki tsutsugi.*

77074. RHODODENDRON MUCRONATUM G. Don.
No. 529. *Ryukyu.* A white variety.

77075. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 530. *Hatsunami.* A rose-colored Kurume, upper lobe blotched, but not conspicuously.

77076. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 531. *Azuma shibori.* A pure white hose-in-hose Kurume.

77077. RHODODENDRON sp.

No. 532. *Kacho no kawa.* Probably a garden hybrid; slightly darker than Spinel pink (Ridgway), with flowers 1½ inches across.

77078. RHODODENDRON sp.

No. 535. *Kan tsutsugi.*

77079. RHODODENDRON sp.

No. 536. *Fuji murasaki.* A large-flowered variety.

77080. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 537. *Wasegiri.* Kurume strawberry pink (Ridgway).

77081. RHODODENDRON sp.

No. 538a. *Ao-umi.*

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[2] RIDGWAY, ROBERT. COLOR STANDARDS AND COLOR NOMENCLATURE. Washington, D. C. 1912.

77064 to 77146—Continued.

77082. RHODODENDRON sp.

No. 539. *Tarasa.*

77083. RHODODENDRON sp.

No. 540a. *Mikawa murasaki.*

77084. RHODODENDRON MUCRONATUM G. Don.

No. 541a. *Karan nishiki.* A white form in which the filaments have become a petaloid rosette.

77085. RHODODENDRON sp.

No. 542. *Shiro ryukyu.*

77086. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 543. *Ogi kassane.* Kurume. Hose-in-hose; rose-pink (Ridgway).

77087. RHODODENDRON INDICUM (L.) Sweet.

No. 544. *Satsuki.* Thulite pink (Ridgway). Dark blotch.

77088. RHODODENDRON sp.

No. 545. *Karenka.*

77089. RHODODENDRON sp.

No. 546. *Ko asobi.*

77090. RHODODENDRON sp.

No. 547. *Murasame.*

77091. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 548. *Gibiyama.* Pale Amparo purple and phlox purple (Ridgway). Five-lobed, starry Kurume.

77092. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 549. *Fujibotan.* Probably not true to name. A very small light pinkish lilac and purplish lilac (Ridgway) Kurume.

77093. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 550. *Tama no midori.* A deep-rose Kurume.

77094. RHODODENDRON INDICUM (L.) Sweet.

No. 551. *Osakazuki.* A rose-pink form.

77095. RHODODENDRON PHOENICEUM CALYCINUM (Lindl.) Wilson.

No. 552. *O murasaki.*

77096. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 553. *Yo zakura.* Foliage somewhat like a Kurume, but with large rose-purple (Ridgway) flowers 2 inches in diameter.

77097. RHODODENDRON sp.

No. 554. *Iro asobi.* Probably a garden hybrid. The plant is like *R. mucronatum.* The light rosolane purple (Ridgway) flowers are 2 inches in diameter.

77098. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 555. *Asahi.* A deep rose-pink (Ridgway) Kurume.

77099. RHODODENDRON sp.

No. 556. *Kurai no himo.*

77100. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 557. *Yaeshojo.* Hose-in-hose. Scarlet-red (Ridgway) Kurume.

77064 to 77146—Continued.

77101. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 558. *Hinode.* Small; rose color (Ridgway) Kurume.

77102. RHODODENDRON sp.

No. 559. *Kagaribi.* Probably a garden hybrid; growth somewhat stronger than a Kurume; the dragons-blood red (Ridgway) flowers are 2 inches in diameter.

77103. RHODODENDRON sp.

No. 560. *Shirataki.*

77104. RHODODENDRON INDICUM (L.) Sweet.

No. 561. *Satsuki.* The flowers are deep rose pink or rose color (Ridgway).

77105. RHODODENDRON sp.

No. 562. *Satsuki.*

77106. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 562. *Hana-asobi.* Small, rose-colored Kurume.

77107. RHODODENDRON sp.

No. 564. *Tama-no-ito.* Light rosolane purple (Ridgway); possibly a garden hybrid; foliage very dark green. The growth somewhat suggests *R. indicum* Sweet.

77108. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 565. *Momo zono.* Hose-in-hose Kurume. Rosolane pink to cameo pink (Ridgway).

77109. RHODODENDRON sp.

No. 566. *Ran ayoku.*

77110. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 567. *Tsutamomiji.* Strawberry pink (Ridgway). Hose-in-hose Kurume.

77111. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 568. *Ima shojo.* Hose-in-hose Kurume. Rose red (Ridgway).

77112. RHODODENDRON sp.

No. 569. *Ho-oden.* Probably a garden hybrid. Hose-in-hose; flowers about 1½ inches in diameter. Thulite pink (Ridgway) irregularly edged with pure white.

77113. RHODODENDRON INDICUM (L.) Sweet.

No. 570. *Beni kirishima.* A semidouble form; the flowers are old rose to Eugenia pink (Ridgway).

77114. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 571. *Kyu miyagimo.* Hose-in-hose; Kurume; deep rose-pink (Ridgway).

77115. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 572. *Sakura kagami.* Kurume; flowers pure white, flushed rose on the tips.

77116. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 573. *Kogasane.* Hose-in-hose Kurume; flowers deep rose-pink to rose (Ridgway).

77117. RHODODENDRON sp.

No. 574. *Shiro satsuki.*

77118. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 575. *Kyo no tsumibana.* Kurume; much like *Honodegiri;* rose to rose red (Ridgway).

77064 to 77146—Continued.

77119. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 576. *Yatsu hashi.* Rose pink to rose (Ridgway) Kurume.

77120. RHODODENDRON sp.

No. 577. *Kumogiri.*

77121. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 578. *Aya no kamuri.* Deep rose-pink (Ridgway) Kurume.

77122. RHODODENDRON sp.

No. 579. *Usuyo.* Probably a garden hybrid; flowers 1½ inches in diameter, mauvette to lilac mauvette (Ridgway).

77123. RHODODENDRON sp.

No. 580. *Kumono ue.*

77124. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 581. *Momiji gasane.* Hose-in-hose Kurume; flowers geranium pink (Ridgway).

77125. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 582. *Hokorobi.* Kurume; flowers white, faintly touched with rose.

77126. RHODODENDRON sp.

No. 583. *Hinohakama.*

77127. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 584. *Komurasaki.* Kurume; flowers light rosolane purple (Ridgway).

77128. RHODODENDRON sp.

No. 585. *Beni kirishima.*

77129. RHODODENDRON sp.

No. 586. *Sakura tsukasa.*

77130. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 587. *Warai gao.* Hose-in-hose Kurume; flowers deep rose-pink (Ridgway).

77131. RHODODENDRON MUCRONATUM G. Don.

No. 589. *Suishoren.* Flowers almost double.

77132. RHODODENDRON sp.

No. 590. *Warai gishi.* Of the general type of *R. indicum*, but the growth is free and erect. The flowers are deep rose-pink (Ridgway).

77133. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 591. *Kotsubo.* Small Kurume; rose (Ridgway).

77134. RHODODENDRON sp.

No. 592. *Futami akebono.* Probably a garden hybrid; the deep rose-pink (Ridgway) flowers are 1½ inches in diameter.

77135. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 593. *Oi no mezame.* Deep rose-pink to rose color (Ridgway) Kurume.

77136. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 594. *Kocho no mai.* Kurume; flowers light phlox purple (Ridgway); lighter in the throat.

77064 to 77146—Continued.

77137. RHODODENDRON sp.

No. 595. *Koraini.* Possibly a garden hybrid (eight stamens), flowers rose blotched with dark red (Ridgway).

77138. RHODODENDRON sp.

No. 596. *Hatsushimo.* Large flowers, 1½ inches in diameter, Hermosa pink (Ridgway). The growth is like a garden hybrid.

77139. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 597. *Koshikibu.* Kurume; flowers have white throat; lips and margins are pale pink.

77140. RHODODENDRON sp.

No. 598. *Higashi yama.*

77141. RHODODENDRON sp.

No. 599. *Shishu.*

77142. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 600. *Koromo shikibu.* Kurume; flowers white with corolla tipped purple.

77143. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 601. *Surisumi.* Kurume; flowers light phlox purple (Ridgway), similar to No. 77136, but color more self.

77144. RHODODENDRON OBTUSUM JAPONICUM Wilson.

No. 602. *Miyagino.* Hose-in-hose, Kurume; flowers are deep rose-pink to Tyrian pink (Ridgway).

77145. RHODODENDRON sp.

No. 605. *Satsuki.*

77146. RHODODENDRON sp.

No. 607. A wild species with large flowers, 1½ inches in diameter, of a deep rose-pink (Ridgway).

77147 to 77154.

From Leningrad, Russia. Seeds presented by A. Kol, chief of the bureau of introduction, Institute of Applied Botany. Received June 22, 1928.

77147 to 77152. BUTIA spp. Phoenicaceae. **Palm.**

77147 to 77149. BUTIA CAPITATA (Mart.) Becc.

Three different forms of this hardy palm native to Argentina which has a spineless trunk, pinnate leaves, and large bunches of small fruits.

77147. No. 93093. 77149. No. 93105.

77148. No. 93101.

77150. BUTIA CAPITATA ODORATA (Barb.-Rodr.) Becc.

No. 93097. A Brazilian palm about 15 feet high, much like the date palm, bearing large bunches of edible fragrant fruits about an inch in diameter.

For previous introduction see No. 54666.

77151 and 77152. BUTIA CAPITATA PULPOSA (Barb.-Rodr.) Becc.

A southern Brazilian palm about 12 feet high, with arched leaves 9 feet long and large clusters of edible yellow fruits 1 to 2 inches in diameter.

For previous introduction see No. 75284.

77151. No. 93102. 77152. No. 93100.

77147 to 77154—Continued.

77153. ERYTHEA EDULIS (Wendl.) S. Wats. Phoenicaceae. **Guadaloupe palm.**

No. 93122. A Guadaloupe Island palm, 50 feet high, with orbicular lacerated leaves 3 feet across and shining black fruits.

77154. JUBAEA CHILENSIS (Molina) Baill. (*J. spectabilis* H. B. K.). Phoenicaceae. **Palm.**

No. 93117. A Chilean palm, 40 feet high, which thrives on very dry soil. The pinnate leaves are 6 to 12 feet long, and the coconutlike fruits are 2 inches in diameter. It is an ornamental palm, but a slow grower.

For previous introduction see No. 47578.

77155. GOSSYPIUM sp. Malvaceae. Cotton.

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, Director, Estación Nacional Agronómica y Colegio de Agricultura, through O. F. Cook, Bureau of Plant Industry. Received June 29, 1928.

Granbolla.

77156 to 77171.

From Soledad, Cienfuegos, Cuba. Seeds presented by R. M. Grey, biological laboratory and botanical garden, Harvard University. Received June 22, 1928.

77156. BAUHINIA VARIEGATA L. Caesalpiniaceae.

Variety *alba*. A form with white flowers beautifully veined with green. It is an Indian tree up to 20 feet high with broadly ovate leaves, 2-lobed at the tip, and small clusters of large flowers.

77157. CARYOTA URENS L. Phoenicaceae. **Toddy palm.**

A Malayan palm up to 80 feet high and 18 inches in diameter, with twice pinnately divided leaves 20 feet long by 12 feet wide; the segments are curved and drooping.

77158. CHRYSALIDOCARPUS MADAGASCARIENSIS Beccari. Phoenicaceae. **Palm.**

A graceful Madagascar palm about 15 feet high, with pinnate leaves 10 feet long, having segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see No. 68113.

77159. CLERODENDRUM ANAFENSE Britt. and P. Wils. Verbenaceae.

A Cuban tree 30 feet high, with obovate cariaceous leaves 2 to 4 inches long and clusters of white flowers an inch long.

77160. CLUSIA MINOR L. Clusiaceae.

A tropical American tree 25 feet high, often starting as an epiphyte, with thick obovate leaves 4 to 6 inches long and axillary solitary showy pink flowers.

77161. CUPANIA AMERICANA L. Sapindaceae.

A Mexican shrub or tree up to 30 feet high, with compound leaves of oblong crenate-serrate pubescent leaflets and panicles of greenish white flowers.

77162. DICTYOSPERMA GRANDIFORMIS Hort. Phoenicaceae. **Palm.**

A spineless palm with pinnately divided leaves of linear-lanceolate segments and rather large white or yellowish flowers.

77163. ERYTHRINA GLAUCA Willd. Fabaceae.

A stately tropical American tree with compound leaves of three rounded coriaceous leaflets and racemes of showy orange flowers each 2 inches across.

For previous introduction see No. 73011.

77156 to 77171—Continued.

77164. EUGENIA LIGUSTRINA (Swartz) Willd. Myrtaceae.

A low tropical American shrub with chartaceous lanceolate leaves shining above and pale beneath, solitary white flowers half an inch across, and globose smooth berries one-fourth inch in diameter.

77165. ILEX GENICULATA Maxim. Aquifoliaceae. **Holly.**

A slender-branched ornamental Japanese shrub with deciduous ovate leaves which turn yellow in autumn and bright-red berries on slender pendulous stalks.

77166. INODES CAUSIARUM O. F. Cook (*Sabal causiarum* Beccari). Phoenicaceae. **Porto Rico hat palm.**

A Porto Rican palm 50 feet high, with a white trunk 2 feet thick and palmately divided leaves about 12 feet in diameter. Most of the palm-leaf hats made in Porto Rico are from the leaves of this tree.

77167. LYSIDICE RHODOSTEGIA Hance. Caesalpiniaceae.

A large handsome tree, native to southern China, with pinnate leaves, loose erect panicles of rosy purple flowers, and pale-pink bracts which persist for several weeks.

For previous introduction see No. 66227.

77168. MAXIMILIANEA VITIFOLIA (Willd.) Krug and Urb. (*Cochlospermum hibiscoides* Kunth). Cochlospermaceae.

For previous introduction and description see No. 76917.

77169. MISANTECA TRIANDRA (Swartz) Mez (*Acrodiclidium jamaicense* Nees). Lauraceae.

A West Indian tree up to 70 feet high, with alternate oblong shining leaves 4 inches long and panicles of white flowers which turn purple with age.

For previous introduction see No. 40849.

77170. STERCULIA FOETIDA L. Sterculiaceae. **Hazel bottletree.**

A tall handsome tropical Asiatic tree with large compound leaves and spreading panicles of dull-red flowers.

For previous introduction see No. 73076.

77171. TILMIA CARYOTAEFOLIA (H. B. K.) O. F. Cook (*Martinezia caryotaefolia* H. B. K.). Phoenicaceae. **Palm.**

A graceful tropical American palm up to 30 feet high, with a ringed stem armed with slender black spines and bright-green spreading and drooping pinnate leaves 4 to 5 feet long.

For previous introduction see No. 73822.

77172. GOSSYPIUM ANOMALUM Wawra. Malvaceae. Cotton.

From Loanda, Angola, Africa. Seeds presented by John Gossweiler. Received June 30, 1928.

A tropical African shrub up to 10 feet high, with tough branches, reddish flowers, and oval capsules about an inch long.

For previous introduction see No. 67974.

77173 to 77214.

From Wanganui, New Zealand. Seeds presented by the Town Clerk, Wanganui City Council. Received June 22, 1928.

77173. ARTHROPODIUM CIRRHATUM (Forst. f.) R. Br. Liliaceae.

A handsome Tasmanian herbaceous perennial 2 to 3 feet high, with shining grasslike leaves and

77173 to 77214—Continued.

showy panicles of white flowers, an inch across, having the stamens covered with pink bristles.

77174. BEILSCHMIEDIA TAWA (A. Cunn.) T. Kirk. Lauraceae.

A tall New Zealand forest tree up to 80 feet high and 4 feet in diameter, with alternate lanceolate leaves 2 to 4 inches long and slender panicles of minute flowers followed by dark-purple ovoid fruits an inch long. The wood is white, straight grained, and easily worked, being used for buckets, tubs, casks, etc. The pulp of the plumlike fruit is eaten raw, and the kernels are steamed.

77175. BRACHYGLOTTIS REPANDA Forst. Asteraceae.

A treelike composite up to 20 feet high, with wavy-margined leaves 6 inches long, covered with milk-white tomentum beneath. The small heads of whitish flowers are borne in drooping panicles. This variety is said to be poisonous to stock.

77176. CARMICHAELIA ARBOREA (Forst. f.) Druce (*C. australis* R. Br.). Fabaceae.

A New Zealand shrub up to 9 feet high, somewhat resembling Scotch broom, with thin flat green branches taking the place of leaves. The clusters of small pealike lilac-striped flowers are followed by small black pods the sides of which drop off and expose the bright-red seeds surrounded by the dark margin of the pod.

77177. CARMICHAELIA ODORATA Colenso.

A much-branched New Zealand shrub, 3 to 10 feet high, leafy in the spring and summer. The slender erect racemes of purple flowers are borne on pendulous branches.

77178. CHORDOSPARTIUM STEVENSONI Cheeseman. Fabaceae.

A leafless New Zealand shrub or small tree up to 20 feet high with long slender pendulous branches and dense racemes of small pea-shaped purple flowers.

77179 and 77180. CLIANTHUS PUNICEUS (Don) Solander. Fabaceae. **Red parrotbeak.**

A drooping undershrub, native to New Zealand, with dark-green pinnate leaves and long pendulous racemes of bright scarlet flowers.

77179. A form with white flowers.

77180. A rosy-flowered form.

77181 to 77183. CORDYLINE spp. Liliaceae.

77181. CORDYLINE AUSTRALIS (Forst. f.) Hook. **Green dracena.**

A tall yuccalike New Zealand plant with clusters of narrowly lanceolate leaves 3 feet long and large loose erect panicles of small palmlike flowers followed by white berries.

77182. CORDYLINE BANKSII Hook. f.

A yuccalike New Zealand tree much like *Cordyline australis*, but the leaves are 6 feet long, and the panicles are drooping.

77183. CORDYLINE INDIVISA (Forst. f.) Steud. **Blue dracena.**

A New Zealand yuccalike plant about 10 feet high, with thick leathery leaves glaucous beneath, large drooping panicles of white flowers and blue berries; it is usually grown in pots while young as a decorative foliage plant.

77184. CORYNOCARPUS LAEVIGATA Forst. Corynocarpaceae. **Karaka.**

A large handsome New Zealand tree with oblong evergreen leaves 5 to 7 inches long, erect

77173 to 77214—Continued.

panicles of small white flowers, and orange fruits an inch long. The pulp of the fruit is poisonous, but the kernels are edible.

For previous introduction see No. 67890.

77185. DRACOPHYLLUM STRICTUM Hook. f. Epacridaceae.

A freely branching New Zealand shrub with erect coriaceous leaves from a sheathing base and tapering to a rigid point, and small terminal panicles of numerous white flowers.

77186. DRACOPHYLLUM SUBULATUM Hook. f. Epacridaceae.

An erect New Zealand shrub 2 to 6 feet high, with long slender twiggy branches leafy at the tips; leaves an inch long, subulate with an auricled sheathing base and a sharp point; flowers in small lateral racemes crowded along the branches.

77187. ELAEOCARPUS HOOKERIANUS Raoul. Elaeocarpaceae.

A round-headed New Zealand tree with serrate lanceolate leaves, racemes of greenish white flowers, and small blue fruits half an inch long.

77188. FAGELIA SINCLAIRII (Hook.) Kuntze (*Calceolaria sinclairii* Hook.). Scrophulariaceae.

An erect slender New Zealand herbaceous plant with coarsely toothed leaves and branching panicles of small white flowers spotted with purple and having two saclike lips.

77189. HYMENANTHERA DENTATA ANGUSTIFOLIA (R. Br.) Benth. Violaceae.

A rigid much-branched Tasmanian shrub with linear-oblong entire leaves an inch long, small nearly sessile axillary flowers, and small berrylike fruits.

77190. LIBERTIA GRANDIFLORA (B. Rr.) Sweet. Iridaceae.

A bulbous New Zealand perennial herb somewhat resembling the iris in habit with linear leaves 1 to 2 feet long, and large panicles of small white sisyrinchiumlike flowers borne on a stalk 3 feet long.

For previous introduction see No. 67002.

77191. LIBERTIA IXIOIDES (Forst. f.) Spreng. Iridaceae.

A New Zealand herbaceous perennial with a short creeping rhizome, forming compact clumps like a beardless iris, rigid coriaceous linear leaves a foot long, and large panicles of small white flowers on a stem 2 feet high.

77192. MELICOPE TERNATA Forst. Rutaceae.

A small New Zealand tree with opposite trifoliolate shining yellowish green leaves and axillary cymes of greenish flowers.

77193. MELICYTUS LANCEOLATUS Hook. f. Violaceae.

A slender New Zealand shrub up to 15 feet high, with narrowly lanceolate finely and sharply serrate leaves 6 inches long, fascicles of small flowers, and globose blue-black berries one-fourth inch in diameter.

77194. MYRTUS OBCORDATA (Raoul) Hook. f. Myrtaceae.

A New Zealand shrub 5 to 15 feet high, with slender spreading branches, fascicled obcordate coriaceous leaves half an inch long, small solitary axillary white flowers, and broadly ovoid dark-red or violet fruits one-fourth inch in diameter.

77173 to 77214—Continued.

77195. NAGEIA EXCELSA (D. Don) Kuntze (*Podocarpus dacrydioides* A. Rich.). Taxaceae.

A large New Zealand conifer over 80 feet high and 6 feet in diameter, with green scalelike leaves and black seeds partly inclosed in edible red berries. The white odorless wood is used for making butterboxes and is suitable for paper pulp.

For previous introduction see No. 44850.

77196. OLEARIA FURFURACEA (A. Rich.) Hook. f. Asteraceae.

A twiggy New Zealand shrub or small tree up to 20 feet high, with alternate broadly ovate coriaceous leaves silvery tomentose beneath and large branching corymbs of small heads of white daisylike flowers.

For previous introduction see No. 47958.

77197. OLEARIA ILICIFOLIA Hook. f. Asteraceae.

A New Zealand shrub or small tree, up to 20 feet high, with a strong musky odor. The alternate lanceolate coriaceous leaves, 2 to 4 inches long, have wavy margins with sharply pointed teeth. The small daisylike flower heads are in large rounded corymbs.

77198. PACHYSTEGIA INSIGNIS (Hook. f.) Cheeseman (*Olearia insignis* Hook. f.). Asteraceae.

A low robust spreading New Zealand shrub 1 to 6 feet high, with stout densely tomentose branches. The entire oblong-ovate leaves, 7 inches long, are excessively thick and coriaceous, glabrous and shining above and thickly clothed with white appressed tomentum beneath. The large hemispherical white flower heads, 3 inches in diameter, are on tomentose peduncles a foot long at the ends of the branches.

77199. OLEARIA sp. Asteraceae.

The New Zealand olearias are shrubs or trees with leathery leaves either white or buff beneath and asterlike heads of white, blue, or purple flowers.

77200. PENNANTIA CORYMBOSA Forst. Icacinaceae.

An ornamental New Zealand tree up to 40 feet high, with broadly oblong glossy leaves 2 inches long, and a profusion of small waxy white fragrant flowers.

77201. POMADERRIS ELLIPTICA Labill. Rhamnaceae.

A New Zealand shrub up to 10 feet high, conspicuous for the stellate pubescence which covers the entire plant. The ovate leaves are 3 inches long, and the greenish white fragrant flowers are in branching clusters.

For previous introduction see No. 45892.

77202. RHIPOGONUM SCANDENS Forst. Smilacaceae.

A New Zealand vine with black snakelike twining stems, thick leathery oval leaves, long racemes of greenish flowers, and oval-pointed brilliant scarlet berries, borne only at the tips of the branches.

77203. RHOPALOSTYLIS SAPIDA (Soland.) Wendl. and Drude. Phoenicaceae. **Nikau palm.**

A New Zealand palm 30 feet high, with a green-ringed stem, pinnate leaves 14 feet long, and large clusters of pale-pink flowers.

For previous introduction see No. 55619.

77173 to 77214—Continued.

77204. RYMANDRA EXCELSA Salish. (*Knightia excelsa* R. Br.). Proteaceae.

A New Zealand tree up to 100 feet high, resembling a Lombardy poplar in appearance. The stiff, linear-oblong serrate leaves are 4 to 8 inches long, and the velvety red flowers are borne in racemes 2 to 3 inches long.

For previous introduction see No. 44956.

77205. SENECIO CRUSTII Hort. Asteraceae.

77206. SENECIO sp. Asteraceae.

The Senecios include some of the most beautiful of the New Zealand shrubs, their yellow daisylike flowers contrasting with the prevailing white of other plants.

77207. SOLANUM AVICULARE Forst. f. Solanaceae.

A branching Australian shrub with laciniate leaves 10 inches long, cymes of 3 to 10 large dark-purple flowers, and drooping yellowish fruits an inch in diameter.

For previous introduction see No. 76032.

77208 and 77209. SOPHORA TETRAPTERA J. Mill. Fabaceae.

A handsome New Zealand tree up to 40 feet high, with pinnate leaves and large golden-yellow flowers.

77208. The typical form.

77209. Variety *grandiflora*. A form with larger and deeper colored flowers.

77210. PASSIFLORA TETRANDRA Banks and Soland. Passifloraceae.

A slender New Zealand climber with glossy lanceolate leaves 3 to 4 inches long, cymes of delicate green flowers, an inch across, with a crown of white stamens, and handsome bright-orange fruits 1 to 2 inches in diameter.

77211 to 77213. VERONICA spp. Scrophulariaceae.

The veronicas, with more than 80 species, constitute the largest genus of New Zealand plants and vary from shrubs with normally expanded entire leaves through shrubs with minute imbricating scalelike leaves, shrubs with toothed fleshy leaves, to slender creeping herbaceous plants.

77211. VERONICA sp.

77212. VERONICA sp.

77213. VERONICA sp.

77214. VITEX LUCENS Kirk. Verbenaceae. **Puriri.**

A handsome New Zealand tree up to 60 feet high, with evergreen 3-foliolate to 5-foliolate leaves and axillary and terminal clusters of pink or red 2-lipped flowers. The timber is strong and durable, not injured by dampness, and is valuable in shipbuilding.

For previous introduction see No. 64198.

77215. GOSSYPIUM STOCKSII Masters. Malvaceae. **Cotton.**

From Trinidad, British West Indies. Seeds presented by Dr. S. C. Harland, of the Empire Cotton-Growing Corporation. Received June 27, 1928.

A tropical Indian shrub with small yellow flowers.

For previous introduction see No. 69374.

77216. Trichilia emetica Vahl. Meliaceae.

From Lourenco Marquez, Mozambique. Seeds obtained through Eugene M. Hinkle, United States vice consul in charge. Received June 30, 1928.

A tropical African tree with pinnately compound leaves of 7 to 11 oblong leaflets 3 to 6 inches long, clusters of greenish flowers, and globose fruits an inch in diameter. An oil, used in cooking and for soap making, is obtained from the seeds.

For previous introduction see No. 58128.

77217 to 77252.

From Kirstenbosch, Newlands, Cape Province, Africa. Seeds presented by R. H. Compton, Director of the National Botanic Gardens. Received June, 1928.

77217 to 77220. Aloe spp. Liliaceae.

77217. Aloe ferox Mill.

A South African perennial with a thick stem 10 to 15 feet high and a rosette of curved glaucous lanceolate leaves 2 feet long by 5 inches wide and half an inch thick. The upper and lower surfaces are prickly, and the purple margins are armed with large red-brown teeth. The flowering stem is 4 feet high, and the greenish yellow flowers with smoky tipped segments are 1 to 2 inches long

77218. Aloe longistyla Baker.

A stemless South African perennial with a dense rosette of about 30 lanceolate green leaves 6 inches long tapering to a horny point and having a pale-brown prickly margin. The bright-red tubular flowers are borne in a dense raceme 3 to 5 inches long.

77219. Aloe variegata L.

A South African perennial with a leafy stem 6 to 9 inches high. The triangular ascending leaves, 2 to 5 inches long, in three close oblique ranks, are green crossed by bands of elongated white blotches and have white, scarcely serrate margins. The flowering stem is about a foot high, bearing a raceme of red tubular flowers 1 to 2 inches long.

77220. Aloe sp.

A succulent-leaved perennial with red or yellow tubular flowers.

77221. Crotalaria capensis Jacq. Fabaceae.

A stout much-branched South African shrub 4 to 5 feet high, with digitately 3-foliolate to 5-foliolate leaves of broadly ovate leaflets an inch long and axillary or terminal racemes of bright-yellow flowers an inch long.

For previous introduction see No. 64058.

77222. Gerbera jamesoni Bolus. Asteraceae.

A hairy South African herbaceous perennial with petioled laciniate radical leaves a foot long and heads of showy orange-colored ray flowers on stalks 1 to 2 feet high.

For previous introduction see No. 66837.

77223. Gladiolus callistus Bolus f. Iridaceae.

An ornamental bulbous South African perennial with four to seven narrowly sword-shaped leaves 1 to 2 feet long and a 1-branched to 3-branched stalk 3 feet high, bearing white flowers with suffused pink.

For previous introduction see No. 64653.

77224. Gladiolus tristis L. Iridaceae.

For previous introduction and description see No. 76689.

77217 to 77252—Continued.

77225. Leucadendron repens L. (*Protea mellifera* Thunb.). Proteaceae.

A large South African shrub up to 8 feet high, with linear-oblanceolate leaves 4 inches long and large heads of whitish flowers surrounded by dark-red to whitish bracts having rosy pink margins and tips.

For previous introduction see No. 36062.

77226 to 77239. Mesembryanthemum spp. Aizoaceae.

77226. Mesembryanthemum caroli L. Bolus.

A decumbent South African perennial with connate triangular glaucous green leaves 2 to 5 inches long and cymes of rosy purple flowers an inch in diameter.

77227. Mesembryanthemum cinctum L. Bolus.

A South African perennial with decumbent branches, erect triangular leaves an inch long with recurved tips, and solitary flowers an inch across with rosy petals having purplish dotted margins.

77228. Mesembryanthemum cordifolium L. f.

A diffuse-stemmed South African perennial 1 to 2 feet long, with opposite cordate leaves somewhat papillose and solitary purple daisylike flowers.

77229. Mesembryanthemum criniflorum L. f.

A South African nearly stemless perennial with flat obovate leaves and peduncles 3 inches long, bearing pale rose-colored, red, or whitish flowers.

77230. Mesembryanthemum diversifolium Haw.

A South African herbaceous perennial with a short stem, semicylindrical leaves 1 to 3 inches long gathered into a head, and daisy-like yellow flowers.

77231. Mesembryanthemum laxum Willd.

A slender diffuse South African shrub with creeping branches, connate flatly 3-angled leaves, and reddish flowers.

77232. Mesembryanthemum ligue N. E. Brown.

An erect South African perennial a foot high, with spreading branches, distant opposite cylindrical leaves half an inch long, one erect and the other deflexed in each pair. The purplish red flowers an inch across are solitary on short peduncles.

77233. Mesembryanthemum maximum Haw.

An erect shrubby South African perennial with large crowded triangularly half-moon shaped glaucous leaves and small reddish flowers.

77234. Mesembryanthemum pugioniforme L.

An upright South African succulent with linear-falcate leaves 6 to 8 inches long in thick tufted rosettes from which arise the flower stems bearing one to three malodorous yellow flowers 3 inches across, opening in the afternoon.

For previous introduction see No. 42447.

77235. Mesembryanthemum putterillii Hort.

A South African succulent.

77217 to 77252—Continued.

77236. MESEMBRYANTHEMUM RUBRICAULE Haw.

A South African perennial with erect reddish stems and branches, flat triangular incurved leaves 1 to 2 inches long, and purplish flowers with lanceolate petals.

77237. MESEMBRYANTHEMUM SPECTABILE Haw.

A prostrate South African succulent with ascending branches, thick 3-sided linear leaves 2 to 3 inches long, and daisylike purplish flowers 2 inches broad.

For previous introduction see No. 42448.

77238. MESEMBRYANTHEMUM STRUBENIAE L. Bolus.

A subshrubby South African perennial 3 to 4 feet high, with purple branches, connate triangular leaves 2 to 3 inches long, and cymes of rosy flowers 1 to 2 inches across.

77239. FAUCARIA TIGRINA (Haw.) Schwantes. (*Mesembryanthemum tigrinum* Haw..)

An almost stemless South African perennial with ovate-cordate white-marbled glaucous green leaves having upturning edges with long soft ciliated teeth. The large yellow flowers are nearly sessile.

77240. PENTZIA sp. Asteraceae.

The pentzias are small rigid much-branched shrubby composites, native to South Africa, with alternate variously cut leaves and yellow flower heads.

77241. PETROPHILA PULCHELLA (Schrad.) R. Br. (*Protea pulchella* Schrad.). Proteaceae.

An Australian shrub 6 to 8 feet high, with compound leaves divided into threadlike segments and conical heads of small white flowers.

For previous introduction see No. 44836.

77242 to 77251. PROTEA spp. Proteaceae.

77242. PROTEA COMPACTA R. Br.

A South African shrub with strongly imbricated ovate-lanceolate coriaceous leaves 3 to 5 inches long and sessile flower heads 4 inches long and 2 inches broad. The outer bracts have a dense fringe of woolly hairs, the inner are flesh colored to carmine, and the flowers are tawny to purplish tomentose with the stamens densely covered with long light-golden hairs.

77243. PROTEA LACTICOLOR Salisb.

A small South African tree up to 10 feet high with lanceolate leaves 3 to 4 inches long and sessile flower heads 3 inches long with yellowish white bracts.

77244. PROTEA LANCEOLATA E. Mey.

A South African shrub up to 6 feet high, with linear-oblanceolate leaves less than 3 inches long and light-yellow solitary terminal flower heads 2 inches long and nearly as wide.

For previous introduction see No. 57264.

77245. PROTEA LATIFOLIA R. Br.

A South African shrub 5 to 8 feet high, with cordate elliptic leaves 4 inches long and large flesh-colored to carmine flower heads nearly 6 inches long and 3 inches broad.

For previous introduction see No. 57265.

77246. PROTEA MARGINATA Thunb.

A South African shrub with thick-margined leaves 3 to 6 inches long and sessile flower heads 5 inches long and nearly as broad, having the tips of the inner bracts covered with a blackish purple beard mixed with white.

77247. PROTEA MUNDI Klotzsch.

A South African shrub with elliptically lanceolate leaves 2 to 5 inches long and sessile flower heads having ciliate green outer bracts and the inner ones whitish pubescent and fringed with white hairs.

77248. PROTEA NERIIFOLIA R. Br.

An erect South African shrub 3 to 5 feet high, with linear leaves 3 to 6 inches long and sessile flower heads 5 inches long having recurved densely silky pubescent outer bracts, inner bracts with a long purplish black beard, and the flowers tipped with purple or brown hairs.

77249. PROTEA OBTUSIFOLIA Buek.

An erect South African shrub with rigid oblong obtuse leaves 4 inches long and flower heads as long as the leaves with white ciliated bracts.

77250. PROTEA SCOLYMOCEPHALA (L.) Reichard.

A small South African shrub 2 to 3 feet high, with narrowly linear-oblanceolate leaves 1 to 3 inches long and somewhat flattened sessile flower heads an inch long, having pale-green ciliolate bracts.

77251. PROTEA SUSANNAE Phillips.

A South African shrub with lanceolate leaves 1 to 5 inches long and flower heads 4 inches long, having purple-tipped bracts.

For previous introduction see No. 48185.

77252. SERRURIA FLORIDA (Thunb.) Knight. Proteaceae.

A South African shrub with erect purplish branches, pinnately divided leaves 1 to 3 inches long, and axillary and terminal clusters of flower heads having white to pinkish yellow bracts.

77253 to 77260.

From Generargues, France. Plants purchased from Gaston Negre. Received January 28, 1928. Numbered June, 1928.

77253. ARUNDINARIA VARIABILIS Makino. Poaceae. **Bamboo.**

A stoloniferous Japanese bamboo, 3 to 4 feet high, with slender stems and few branches. In the typical form the leaves are green, but there are many varieties with variegated leaves.

77254. BAMBUSA ANGULATA Munro. Poaceae. **Bamboo.**

A square-stemmed Chinese bamboo up to 30 feet high, with rich green leaves 4 to 8 inches long.

For previous introduction see No. 42657.

77255 to 77259. PHYLLOSTACHYS spp. Poaceae. **Bamboo.**

77255. PHYLLOSTACHYS BAMBUSOIDES Sieb. and Zucc. (*P. quilioi* Riv.). Poaceae.

This Chinese bamboo is one of the hardiest and has bright-green stems up to 40 feet high and 6 inches thick. The stem sheaths are mottled with purple, and the leaves are often 6 inches long.

For previous introduction see No. 75154.

77253 to 77260—Continued.

77256. PHYLLOSTACHYS BAMBUSOIDES MARLIACEA (Mitf.) H. de Lehaie.

A Japanese bamboo up to 10 feet high, with the base of the stems wrinkled with longitudinal grooves and ridges.

For previous introduction see No. 42665.

77257. PHYLLOSTACHYS MITIS Riv.
Moso bamboo.

A Chinese bamboo up to 30 feet high, with yellow stems and brown-spotted sheaths.

For previous introduction see No. 49357.

77258. PHYLLOSTACHYS PUBERULA BORVANA (Mitf.) H. de Lehaie.

A form of the black-joint bamboo of China, with stems at first green, but changing to dull yellow with purplish brown blotches.

77253 to 77260—Continued.

77259. PHYLLOSTACHYS PUBERULA NIGRA (Lodd.) H. de Lehaie.

Variety *Muchisasa*. One of the most elegant of bamboos with black stems up to 20 feet high and plumelike masses of dark-green leaves. Native to China and Japan.

For previous introduction see No. 75159.

77260. SASA HUMILIS (Mitf.) E. G. Camus (*Arundinaria gracilis* Hort.). Poaceae.
Bamboo.

A very slender dwarf bamboo, native to Japan, with green stems 3 feet high bearing two or three long branches at each node.

For previous introduction see No. 75164.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 96

Washington, D. C. ▼ Issued February, 1930

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1928 (NOS. 77261 TO 77595)

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INTRODUCTORY STATEMENT

The most outstanding plant material contained in this inventory, No. 96, covering the period from July 1 to September 30, 1928, is the collection of 51 sugarcane varieties (*Saccarum officinarum*, Nos. 77334 to 77384) procured by E. W. Brandes in New Guinea for use in his official investigations. Part of the interest in this shipment is due to the fact that Doctor Brandes is the first agricultural explorer to use an airplane for his collecting tour. Doctor Brandes not only collected sugarcanes in person but also obtained the cooperation of P. H. Goldfinch, Sydney, Australia, who sent in a collection of 44 varieties (Nos. 77496 to 77539). Another lot of five varieties (Nos. 77298 to 77302) was received from Argentina.

As in the previous inventory, the bulk of the plant material received in this period comes from the Southern Hemisphere. Through the activities of Mrs. Frieda Cobb Blanchard two collections of Australian plants (Nos. 77273 to 77292 and Nos. 77441 to 77447), as well as a collection from New Zealand (Nos. 77540 to 77582), were received.

Through O. F. Cook there was received a collection of rubber-producing plants (Nos. 77387 to 77394) from Haiti. Five kinds of cover crops (Nos. 77293 to 77297) from Ceylon may be of value for the southern United States. Another interesting shipment consists of apricot varieties (*Prunus armeniaca*, Nos. 77466 to 77472) from Palestine. A bamboo native to Japan (*Sasa tesselata*, No. 77333) was received from France to be added to the growing bamboo collection at the Barbour Lathrop Plant Introduction Garden at Savannah, Ga.

The growing interest in flowering cherries warrants a note of the collections presented by the Arnold Arboretum (*Prunus* spp., Nos. 77261 to 77266 and Nos. 77404 to 77411). Along this same line is a shipment of six varieties (*Prunus* spp., Nos. 77313 to 77318) from Capt. Collingwood Ingram, of England.

Various plants have been obtained for study as ornamentals, some of them quite unknown as yet and others not commonly grown in this country. As compared to other inventories their number here is relatively small and none

call for special mention, save perhaps the several Lycoris species (Nos. 77586 to 77588) and the Nerines (Nos. 77590 to 77592), all of them species long known to cultivation but not sufficiently used even in parts of our country where they are known to be hardy.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., August 14, 1929.

INVENTORY[1]

77261 to 77267.

From Jamaica Plain, Mass. Scions presented by E. H. Wilson, Arnold Arboretum. Received August 8, 1928.

77261 to 77266. PRUNUS spp. Amygdalaceae.

77261. PRUNUS INCISA Thunb.
Mame cherry.

An ornamental Japanese shrub or small tree about 25 feet high. The flowers, which appear in drooping clusters before the deeply cut leaves, are white or rosy, with bright-red calyxes, and the anthers are bright yellow. The petals fall early, but the calyxes, which gradually grow brighter, remain on the young fruits for some time and are very showy.

For previous introduction see No. 74428.

77262. PRUNUS MAACKII Rupr.
Amur cherry.

A Manchurian bird cherry, 40 feet or more in height, with very smooth brownish yellow bark which peels off like that of a birch. The leaves are pointed and very finely toothed, and the white flowers are in short racemes borne on the previous season's wood.

For previous introduction see No. 64239.

77263 to 77265. PRUNUS SERRULATA Lindl. **Oriental cherry.**

77263. Variety *Chosiuhizakura* [red cherry from Chosen]. Tree of spreading habit; young foliage reddish brown; flowers uniformly pink, up to 1½ inches in diameter, single or semidouble, in clusters of two to four, produced in great abundance.

For previous introduction see No. 47133.

77261 to 77267—Continued.

77264. Variety *Masuyama* [probably named for some Japanese person]. Tree spreading, up to 15 feet high; bark reddish brown; young foliage brownish green; buds deep pink, truncate; flowers up to 1½ inches in diameter, double, light pink shading deeper toward the margins and opening flat, similar to *Horinji* but a little less double and presenting a more clean-cut appearance. A very attractive variety.

77265. Variety *Miyako* [beauty or prosperity]. Tree of upright habit; bark dark brown; young foliage light brown; buds deep pink, truncate; flowers semidouble opening rather flat, up to 1½ inches in diameter, almost white in center, becoming pink toward the fimbriate petal tips and on back, in drooping clusters. A very attractive variety.

77266. PRUNUS SUBHIRTELLA Miquel. **Higan cherry.**

Higanzakura [Higan signifies equinox in Japanese]. Tree very spreading, up to 40 feet high; bark gray, smooth. Flowers single, light pink, appearing before the leaves. This is perhaps superior to *Yoshino* for mass effect, because of the compact habit of growth and the great numbers of flowers produced.

77267. SYRINGA PINNATIFOLIA Hemsl. Oleaceae. **Pinnate lilac.**

A western Chinese shrub up to 10 feet high, with pinnate leaves 2 to 4 inches long made up of 7 to 11 ovate to lanceolate leaflets. The lilac-tinged white flowers are in short panicles 2 to 3 inches long.

[1] It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identification, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

77268. GARCINIA BINUCAO (Blanco) Choisy. Clusiaceae. **Binukao.**

From Manila, Philippine Islands. Seeds presented by José S. Camus, Acting Director of the Bureau of Agriculture. Received September 5, 1928.

A large tropical tree, native to the Philippines, up to 100 feet high, with clusters of small red flowers and globular yellow fruits 2 inches in diameter. It is a possible stock for the mangosteen.

For previous introduction see No. 63853.

77269. WASHINGTONIA SONORAE S. Wats. Phoenicaceae. **Palm.**

From Soledad, Cienfuegos, Cuba. Seeds presented by R. M. Grey, Superintendent of the Biological Laboratory and Botanical Garden. Received August 14, 1928.

A palm up to 25 feet high, native to Sonora, Mexico, with fan-shaped leaves, about 3 feet broad, copiously divided into drooping fibers on the margin and the petioles armed with stout curved spines. The flower cluster is 5 to 8 feet long, and the small black fruits are said to be edible.

77270. ACER sp. Aceraceae. **Maple.**

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received August 20, 1928.

No. 701. July 26, 1928. A very attractive maple growing on the trail between Hajikano and Tenmokuzan, in the mountains of the northeastern part of Yamanashi Ken.

77271. ADANSONIA DIGITATA L. Bombacaceae. **Baobab.**

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by A. H. Kirby, Director, Department of Agriculture. Received August 20, 1928.

An African tree about 60 feet high and sometimes 30 feet in diameter, with palmate leaves divided into five to seven leaflets, large white flowers 6 inches across, and large gourdlike fruits with pulp which is edible.

For previous introduction see No. 76635.

77272. ROSA ODORATA GIGANTEA (Collett) Rehd. and Wils. Rosaceae. **Giant tea rose.**

From Melbourne, Australia. Seeds presented by Alister Clark, through Mrs. Frieda Cobb Blanchard, University of Michigan, Ann Arbor, Mich. Received August 10, 1928.

A strong climbing evergreen rose, native to Burma, with creamy white single flowers 4 to 6 inches across. It resembles somewhat the Cherokee rose, but is hardy only in the far South.

77273 to 77292.

From Sydney, Australia. Seeds presented by Mrs. Frieda Cobb Blanchard, University of Michigan, Ann Arbor, Mich. Received August 13, 1928.

77273 to 77275. ACACIA spp. Mimosaceae.

77273. ACACIA ACUMINATA Benth.

A tree 30 to 40 feet high, native to Western Australia, with falcate-linear phyllodes 3 to 10 inches long and small flower spikes an inch long. The wood, which has an odor resembling raspberry jam, is dark reddish brown, close-grained, and hard, and is suitable for ornamental woodwork and for fence posts.

For previous introduction see No. 48982.

77274. ACACIA MICROBOTRYA Benth.

A tall Western Australian shrub with falcate-lanceolate phyllodes 3 to 5 inches long and short racemes of small globular flower heads.

For previous introduction see No. 48053.

77275. ACACIA ROSSEI F. Muell.

A tall heathlike shrub, native to Western Australia, with short linear-falcate phyllodes and corymbs of small flower heads.

77276. BRUNONIA AUSTRALIS J. E. Smith. Goodeniaceae.

A silky hairy tufted perennial, native to Australia, with a rosette of linear-obovate entire leaves 2 to 4 inches long and scapes 6 to 12 inches high bearing globular blue flower heads less than an inch in diameter.

77277. CALOTHAMNUS GILESII F. Muell. Myrtaceae.

An Australian shrub with linear-terete leaves and loose clusters of reddish flowers.

For previous introduction see No. 67070.

77278. CASSIA EREMOPHILA A. Cunn. Caesalpiniaceae.

A handsome Australian shrub 5 feet high, with leaves made up of two pairs of narrow leaflets and yellow flowers. The leaves and pods are said to be eaten by stock.

For previous introduction see No. 52353.

77279. CYANOSTEGIA LANCEOLATA Turcz. Verbenaceae.

An erect glutinous shrub, native to western Australia, with lanceolate leaves 1 to 2 inches long and loose terminal pyramidal panicles of purple flowers followed by small 1-seeded fruits covered with long branching hairs.

77280. DAMPIERA WELLSIANA F. Muell. Goodeniaceae.

A tufted perennial, native to Western Australia, with thick glabrous radical leaves and erect wooly tomentose stems bearing bracted globular heads of small blue flowers.

77281 to 77283. EUCALYPTUS spp. Myrtaceae.

77281. EUCALYPTUS BURRACOPPINENSIS Maiden and Blakely.

A Western Australian shrub or small tree 8 to 15 feet high, with thick light-green lanceolate leaves 4 to 6 inches long, small axillary clusters of rather large yellowish white flowers, and flattened top-shaped fruits.

77282. EUCALYPTUS ERYTHRONEMA Turcz.

A small Australian tree with reddish bark, thick shining lanceolate leaves 3 inches long, and recurved umbels of red flowers.

77273 to 77292—Continued.

77283. EUCALYPTUS MACROCARPA Hook.

A stout Australian shrub or small tree up to 15 feet high with thick rigid cordate glaucous leaves 6 inches long and large solitary brilliant orange to crimson flowers.

For previous introduction see No. 48990.

77284. GOODENIA CAERULEA R. Br. Goodeniaceae.

A tufted herbaceous perennial, native to Western Australia, with several angled stems a foot high, rigid linear leaves, and axillary blue flowers nearly an inch long.

77285 to 77287. ISOPOGON spp. Proteaceae.

77285. ISOPOGON DIVERGENS R. Br.

A bushy glabrous shrub 2 to 4 feet high, native to Western Australia, with leaves 2 to 5 inches long pinnately divided into rigid slender terete segments. The conspicuous purple flowers an inch long are borne in conelike clusters.

77286. ISOPOGON SCABRIUSCULUS Meissn.

A much-branched rigid Western Australian shrub with linear nearly terete leaves 3 to 6 inches long and small globular conelike clusters of flowers covered with dense white hairs.

77287. ISOPOGON SPHAEROCEPHALUS Lindl.

An erect shrub several feet high, native to Western Australia, with the branches sprinkled with long spreading hairs. The linear to lanceolate leaves are 2 to 4 inches long, and the flowers in the conelike clusters are densely covered with yellow hairs.

77288. KENNEDIA COMPTONIANA (Andrews) Link (*Hardenbergia comptoniana* Benth.). Fabaceae.

A twining herbaceous or subshrubby Australian vine with three to five cordate linear to ovate leaflets and long sprays of deep violet-blue flowers.

For previous introduction see No. 47191.

77289. KENNEDIA PROSTRATA R. Br. Fabaceae.

A prostrate pubescent Australian vine with leaves composed of three cordate broadly obovate leaflets an inch long and axillary peduncles bearing two to four scarlet flowers.

For previous introduction see No. 56576.

77290. PIMELEA SYLVESTRIS R. Br. Thymelaeaceae.

A Western Australian shrub, 2 to 3 feet high, with opposite concave-lanceolate leaves less than an inch long and small yellowish or pinkish flower heads surrounded by four to six broad persistent bracts.

77291. PITYRODIA RACEMOSA (Turcz.) Benth. Verbenaceae.

An erect shrub about 2 feet high, native to Western Australia, densely covered with loose floccose white wool. The thick soft oblong clasping leaves are opposite and nearly an inch long, and the blue sagelike flowers are in racemose clusters.

77273 to 77292—Continued.

77292. STACHYSTEMON VERMICULARIS Planch. Euphorbiaceae.

An erect glabrous shrub, native to Western Australia, with wiry stems a foot high, linear leaves less than an inch long, and inconspicuous flowers clustered at the ends of the branches.

77293 to 77297.

From Peradeniya, Ceylon. Seeds purchased from the manager of the publication depot and central seed store of the Department of Agriculture. Received August 14, 1928.

77293. BRADBURYA PUBESCENS (Benth.) Kuntze (*Centrosema pubescens* Benth.).

A tropical American leguminous vine with trifoliolate leaves and small yellowish flowers, which is used as a cover crop.

For previous introduction see No. 76771.

77294. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

A tropical American legume with stems 3 to 10 feet long which form roots at each node, and racemes 1 to 4 inches long of pale-blue flowers. It forms a mat of foliage 1 to 2 feet thick and is used as a cover crop.

For previous introduction see No. 76095.

77295. DOLICHOS HOSEI Craib. Fabaceae.

A creeping leguminous vine, native to the Malay States, with rich light-green leaves and yellow flowers. It is used as a cover crop in rubber plantations, also for green manure.

For previous introduction see No. 76102.

77296. INDIGOFERA ENDECAPHYLLA Jacq. Fabaceae.

Annual or biennial tropical African prostrate legume, 2 to 3 feet long, with seven to nine oblong leaflets and dense racemes of violet-purple flowers. It is used as a cover crop.

For previous introduction see No. 67844.

77297. MEIBOMIA GYROIDES (DC.) Kuntze (*Desmodium gyroides* DC.) Fabaceae.

A shrubby leguminous plant 8 to 10 feet high, native to the warmer parts of the central and eastern Himalayas. It has pubescent leaves and terminal racemes of reddish purple flowers.

For previous introduction see No. 76774.

77298 to 77302. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Tucuman, Argentina. Cuttings presented by Dr. William E. Cross, Director, Estación Experimental Agricola, through E. W. Brandes, Bureau of Plant Industry. Received August 25, 1928.

Promising mosaic resistant or immune varieties which have given good results in Argentina.

77298. No. 362.
77299. No. 407.
77300. No. 450.
77301. No. 454.
77302. No. 472.

77303. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Tiflis, Georgia, Russia. Seeds presented by the director of the Botanic Garden. Received August 20, 1928.

Locally grown seeds.

77304 and 77305. LACTUCA SATIVA L. Cichoriaceae. **Lettuce.**

From Yungsui, Hunan, China. Seeds presented by Father Theophane Maguire, C. P., Catholic Mission, Passionist Fathers. Received August 30, 1928.

Awh swen. A vegetable planted in this region during the early months of the year. When it has sprouted the sprouts are transplanted about a foot apart. The sturdy stem when developed is peeled and sliced into thin pieces. It may be prepared uncooked, eaten like cucumbers with vinegar, etc., or it may be cooked with meat juices until soft.

77304. A foreign variety.

77305. A native variety.

77306. CITRUS sp. Rutaceae. **Cuban shaddock.**

From Holguin, Cuba. Seeds presented by Thomas R. Towns. Received August 17, 1928.

A shaddock used as a stock for citrus varieties in Cuba; especially good for navel orange, but not for grapefruit or the kumquat.

For previous introduction see No. 68978.

77307. ERIOBOTRYA JAPONICA (Thunb.) Lindl. Malaceae. **Loquat.**

From Yungsui, Hunan, China. Seeds presented by Father Theophane Maguire, C. P., Catholic Mission, Passionist Fathers. Received August 30, 1928.

The fruits are not large, and they are gathered in clusters because the seeds leave little meat. This variety makes delicious jam.

77308 to 77312. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Peru. Seeds obtained through O. F. Cook, Bureau of Plant Industry. Received July 26, 1928.

77308. GOSSYPIUM sp.

No. 1. *Tanguis.* From Huacho Valley, Pisco.

77309. GOSSYPIUM sp.

No. 2. *Tanguis.* From Huacho Valley. Pisco.

77310. GOSSYPIUM sp.

No. 3. *Algodon tanguis.* From Unanue hacienda, Canete Valley.

77311. GOSSYPIUM sp.

No. 4. *Algodon tanguis.* From Unanue hacienda, Canete Valley.

77312. GOSSYPIUM sp.

No. 5. *Algodon tanguis.* From Hualcura hacienda, Canete Valley.

77313 to 77318. PRUNUS spp. Amygdalaceae.

From Benenden, Kent, England. Bud sticks presented by Capt. Collingwood Ingram. Received August 7, 1928.

77313. PRUNUS INCISA × SERRULATA.

Umineko.

77314. PRUNUS INCISA × SUBHIRTELLA.

77315 to 77317. PRUNUS SERRULATA Lindl. **Oriental cherry.**

77315. *Daikoku* [the god of prosperity]. A variety introduced into England about 1905, with large purplish pink double flowers up to 2 inches wide. The thick purplish red buds are truncate at the end, and the young foliage is yellowish green.

For previous introduction see No. 72008.

77316. *Hokusai* [named by Captain Ingram after the famous Japanese artist]. Tree spreading, up to 20 feet high; young leaves bronze colored; flowers semidouble up to 2 inches in diameter, light pink, borne in loose clusters.

77317. *Cheal's Weeping cherry.* Tree of medium size, with pendulous branches and a profusion of rather small but double deep-pink flowers resembling carnations.

77318. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Makino (*P. sargenti* Rehder). **Sargent cherry.**

A tall handsome tree, native to northern Japan, up to 80 feet high, with smooth dark-brown bark and ovate or ovate-lanceolate, sharply serrate leaves up to 5 inches long. The single pink flowers, 1 to 1½ inches wide, are in few-flowered clusters, and the black fruits are about the size of peas. This wild Japanese cherry is considered by E. H. Wilson, of the Arnold Arboretum, Jamaica Plain, Mass., to be the parent of several of the finest double-flowered varieties of flowering cherries and also to be the most satisfactory stock on which to work these varieties.

For previous introduction see No. 73881.

77319. ANTHEMIS SANCTI-JOHANNIS Stoy., Steff., and Turrill. Asteraceae.

From Victoria, British Columbia, Canada. Seeds presented by J. C. Bennett. Received August 31, 1928.

An ornamental herbaceous perennial, 3 to 4 feet high, native to the mountain slopes of Bulgaria at an altitude of 4,000 feet. The woolly stems, with few branches, have two to three times partly pinnate basal leaves, 5 to 7 inches long, the tips of which are armed with hard white acuminate points. The stem leaves are similar but gradually smaller, leaving bare stems 3 to 7 inches below the flower heads, which are solitary, 1 to 2 inches broad, and the ray flowers and disk are an intense orange, making a brilliant showing in contrast to the woolly leaves.

77320. PTYCHOSPERMA MACARTHURI Wendl. Phoenicaceae. **Palm.**

From Little River, Fla. Seeds presented by Charles F. Simpson. Received August 30, 1928.

77320—Continued.

An Australian cluster palm now 14 feet high and having about a dozen stems. It bears pinnate leaves eroded at the ends of the leaflets. It may seed at almost any time of the year. This palm was blown down and badly broken by the big hurricane, but it is beginning to regain something of its former beauty. (*Letter of August 22, 1928, from Mr. Simpson.*)

77321 to 77326.

From Madagascar. Seeds collected by Charles F. Swingle, Bureau of Plant Industry. Received August 21, 1928.

77321. BAPHIA CAPPARIDIFOLIA Baker. Fabaceae.

No. 4426. From Mananika, Valley of Betsiboka, July 6, 1928. A shrub or tree, native to Madagascar, with slender branchlets, simple lanceolate leaves 2 to 3 inches long, and cymes of yellow flowers half an inch across.

77322. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). Rutaceae. **Grapefruit.**

July 3, 1928. Pink-fleshed grapefruit obtained in the market at Majunga. Several of the fruits obtained at this time were entirely seedless.

77323. GOSSYPIUM OBTUSIFOLIUM AFRICANUM Watt. Malvaceae. **Cotton.**

No. 4429. From Mananika, Valley of Betsiboka, July 6, 1928. A half-woody African shrub, 6 feet high, which differs from the Indian form in having more copious and finer wool. The flowers are yellow, changing to reddish.

For previous introduction see No. 63728.

77324. HIBISCUS SABDARIFFA L. Malvaceae. **Roselle.**

No. 4412. From Mananika, Valley of Betsiboka, July 6, 1928. A half-woody tropical shrub with a stem 3 to 6 feet high and 2 inches in diameter; horizontal branches; calyx succulent, acid, edible; flowers used for marmalade.

77325. URENA LOBATA L. Malvaceae.

No. 4383. From Madriovala, Valley of Betsiboka, July 5, 1928. An erect undershrub with cordate entire or lobed leaves 2 to 3 inches long, flowers an inch across, rose red at the base and small fruits armed with hooked bristles. The stems furnish a fiber used for bags and twine.

For previous introduction see No. 52228.

77326. (Undetermined.)

No. 4427. A large tree growing at Mananika, Valley of Betsiboka, July 6, 1928.

77327 to 77330. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Calcutta, India. Seeds presented by the curator of the industrial section of the Indian Museum. Received September 5, 1928.

77327. *Elokeshi.*

77328. *Kuli.*

77329. *Makre.*

77330. *Muktaveshi.*

77331. CAPSICUM VIOLACEUM H. B. K. Solanaceae.

From Santa Cruz, Calif. Seeds presented by C. A. Reed. Received September 7, 1928.

The seeds of this variety were originally obtained in Peru in 1918 and planted in the hills near Santa Cruz in 1919. Two of the original plants are producing fruits, and the seeds received are from one of these plants which is now 9 feet high.

77332. CITRUS sp. Rutaceae. **Pison.**

From Sorsogon, Luzon, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received September 12, 1928.

Obtained in the market. A juicy fruit of subacid and very pleasant taste, something like a grapefruit but sweeter. Judging from the samples obtained, it is too fibrous and seedy for eating, but it might be that in cultivation much of the fiber would disappear. The trees are said to be 40 feet high and very vigorous, so this variety may prove a promising new citrus stock.

77333. SASA TESSELATA (Munro) Mak. and Shib. (*Arundinaria ragumowski* Pfitzer). Poaceae. **Bamboo.**

From Generargues, France. Plant purchased from Gaston Negre. Received January 28, 1928. Numbered July, 1928.

A Japanese bamboo, 3 to 6 feet high, with arching stems and broad rounded masses of large leaves.

For previous introduction see No. 75167.

77334 to 77384. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Port Moresby, New Guinea. Cuttings collected by E. W. Brandes, Bureau of Plant Industry. Received September 12, 1928.

77334. No. 1.

77335. No. 2.

77336. No. 3.

77337. No. 4.

77338. No. 5.

77339. No. 6.

77340. No. 7.

77341. No. 21.

77342. No. 22.

77343. No. 23.

77344. No. 24.

77345. No. 25.

77346. No. 26.

77347. No. 251.

77348. No. 252.

77349. No. 253.

77350. No. 254.

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77334 to 77384—Continued.

77353. No. 257.

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77365. No. 269.

77366. No. 270.

77367. No. 271.

77368. No. 272.

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77370. No. 274.

77371. No. 275.

77372. No. 276.

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77374. No. 278.

77375. No. 279.

77376. No. 280.

77377. No. 281.

77378. No. 282.

77379. No. 283.

77380. No. 284.

77381. No. 285.

77382. No. 286.

77383. No. 287.

77384. No. 288.

77385 and 77386.

From Richmond, Australia. Seeds presented by F. H. Baker. Received September 7, 1928.

77385. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). Myrtaceae. **Lemon bottlebrush.**

An Australian shrub up to 12 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens.

For previous introduction see No. 74424.

77386. HAKEA ACICULARIS (Vent.) Knight (*H. sericea* Schrad.). Proteaceae.

A tall evergreen Australian shrub or small tree with awl-shaped leaves 1 to 3 inches long and axillary clusters of small white flowers.

For previous introduction see No. 73855.

77387 to 77394.

From Haiti. Seeds obtained through O. F. Cook, Bureau of Plant Industry. Received September 11, 1928.

77385 and 77386—Continued.

77387 to 77391. CASTILLA spp. Moraceae.

Tropical trees from which rubber is obtained.

77387. CASTILLA ELASTICA Cerv. **Rubbertree.**

A large deciduous tropical American forest tree from which rubber is obtained.

For previous introduction see No. 61483.

77388. CASTILLA PANAMENSIS O. F. Cook.

A large tree, native to Panama, with oblong leaves about a foot long which are very rough above and hairy beneath. The fruiting receptacles, produced in great profusion, are orange-red and are very showy. This tree is commonly planted in Central America as a shade tree.

For previous introduction see No. 30514.

77389. CASTILLA sp.

77390. CASTILLA sp.

X–1.

77391. CASTILLA sp.

X–2.

77392. CRYPTOSTEGIA GRANDIFLORA R. Br. Asclepiadaceae. **Palay rubbervine.**

An erect woody climber of unknown nativity, but now cultivated in many places in the Tropics of both hemispheres as an ornamental, and occasionally growing as an escape from cultivation. The flowers, reddish purple becoming pale pink, are about 2 inches in diameter, resembling those of our common milkweed, and are produced in short spreading cymes. In India the plant is called *palay* and is cultivated for the rubber obtained from the juice.

For previous introduction see No. 75218.

77393. FUNTUMIA ELASTICA (Preuss) Stapf. Apocynaceae. **Lagos rubbertree.**

A large forest tree which is very widely distributed throughout central Africa and is the source of Lagos rubber, which is of excellent quality.

For previous introduction see No. 73991.

77394. HEVEA BRASILIENSIS (H. B. K.) Muell. Arg. Euphorbiaceae. **Para rubbertree.**

From Bayeux, Haiti. A tropical Brazilian tree now extensively cultivated for rubber.

For previous introduction see No. 72980.

77395 and 77396. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Kashan, Persia. Seeds obtained from Aquai Hassan Agha Assady. Received September 18, 1928.

77395. No. 1. 77396. No. 2.

77397 and 77398. CANNABIS SATIVA L. Moraceae. **Hemp.**

From Valdivia, Chile. Seeds presented by J. A. Momberg, through L. H. Dewey, Bureau of Plant Industry. Received September 20, 1928.

77397. A variety grown at the city of Valdivia.

77398. A variety grown at Lanco.

77399. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

From Port Moresby, New Guinea. Plants collected by E. W. Brandes, Bureau of Plant Industry. Received September 13, 1928.

A variety grown by the natives in New Guinea.

77400 and 77401. LILIUM spp. Liliaceae. **Lily.**

From Chosen. Bulbs collected by R. K. Beattie, Bureau of Plant Industry. Received July 10, 1928.

77400. LILIUM sp.

No. 686. June 1, 1928. Plants growing in the shade of trees by the trail at Makaen, about 6 miles northeast of Choanji, in the Inner Kongosan or Diamond Mountains.

77401. LILIUM sp.

No. 706. June 12, 1928. A red-flowered lily, with dark spots inside the flower, growing in dry rocky places on the hills west of Shinchido, which is located on the railroad between Heijo and Chinnampo. The plants were in bud when gathered.

77402. PASSIFLORA LIGULARIS Juss. Passifloraceae. **Sweet granadilla.**

From Peru. Seeds presented by Gale H. Carter, Grace Line, New York City, N. Y. Received September 1, 1928.

These granadilla seeds are especially selected from the common variety which grows in the district of Lima.

For previous introduction see No. 54035.

77403. ANANAS MAGDALENAE (Andre) Standl. Bromeliaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received July 7, 1928.

Pita de Colombia. A wild tropical American pineapple with bright-red subglobose fruits 6 inches in diameter on long stalks. The long leaves contain a fiber used for rope and twine, and the acid fruits are eaten either raw or cooked.

77404 to 77411. PRUNUS spp. Amygdalaceae.

From Jamaica Plain, Mass. Seeds presented by E. H. Wilson, Arnold Arboretum. Received July 11, 1928.

77404. PRUNUS CONCINNA Koehne.

A small upright shrub, native to the mountains of central China. The single light-pink flowers with deeper pink calyxes, about an inch across, are produced in great abundance and form a pleasing combination with the deep-green young foliage and gray bark.

77404 to 77411—Continued.

77405. PRUNUS INCISA Thunb. **Mame cherry.**

For previous introduction and description see No. 77261.

77406. PRUNUS INCISA SERRATA Koidz.

Differs from the typical form chiefly in having leaves with almost simple serrations and long aristate teeth.

77407. PRUNUS NIPPONICA Mats.

A bushy tree, up to 20 feet high, with oval, long-pointed doubly serrate leaves 1 to 3 inches long and single, light-pink flowers an inch across, solitary or in twos or threes. It is a handsome cherry when in full bloom.

77408. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Makino (*P. sargenti* Rehder). **Sargent cherry.**

For previous introduction and description see No. 77318.

77409. PRUNUS SERRULATA SPONTANEA (Maxim.) Wilson.

This is the *Yamazakura* [mountain cherry] of southern Japan. It is a rather common wild tree in thickets from the extreme south to about the central portion in the vicinity of Nikko. Under favorable conditions it becomes a spreading tree 60 feet or more in height, and differs from *Prunus serrulata sachalinensis* in having smaller flowers. Its chief value appears to be as an understock for the cultivated varieties of flowering cherries.

For previous introduction see No. 55717.

77410. PRUNUS SUBHIRTELLA Miquel. **Higan cherry.**

For previous introduction and description see No. 77266.

77411. PRUNUS SUBHIRTELLA AUTUMNALIS Makino.

Jugatsuzakura [October cherry; literally tenth-month cherry]. Tree spreading, with a rounded crown, about 20 feet high; flowers rosy pink, semidouble, about half an inch in diameter, abundantly produced early in October, with a smaller crop of flowers in the spring; sometimes the heavier crop of flowers is borne in the spring.

For previous introduction see No. 69091.

77412. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae. **Lime.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, through W. T. Swingle, Bureau of Plant Industry. Received July 7, 1928.

Mindoro. A Philippine variety with juicy thin-skinned fruits which are the size and shape of a small lemon and very precocious.

77413. MERREMIA PELTATA (L.) Merr. Convolvulaceae. **Morning-glory.**

From Los Banos, Laguna Province, Philippine Islands. Seeds collected by O. W. Pflueger, Los Banos School of Forestry, and presented by P. J. Wester, Bureau of Agriculture, Manila. Received July 9, 1928.

77413—Continued.

Tampinita. A Philippine morning-glory with large dark-green leaves and large clusters of very showy yellow flowers.

77414. CYCAS sp. Cycadaceae.

From Kobe, Japan. Plants obtained by Prof. H. H. Bartlett, Director, Botanic Gardens and Arboretum, University of Michigan, Ann Arbor. Received August 25, 1927. Numbered July, 1928.

Dwarf cycads put on the S. S. *President Van Buren* for decorating the ship. They are a specialty of the nurserymen at Kobe and seem to be different from the ones common in greenhouses in the United States. They are ornamental palmlike woody plants, with glossy green pinnate leaves, and are native to tropical Asia.

77415 to 77420. SACCHARUM OFFICINARUM L. Poaceae. Sugarcane.

From Australia. Cuttings obtained through E. W. Brandes, Bureau of Plant Industry. Received July 12, 1928.

These varieties were collected in northern New South Wales.

77415. *H. Q. 5.*
77416. *N. G. 14.*
77417. *N. G. 16.*
77418. *Bogela.*
77419. *Mahona.*
77420. *Q. 813.*

77421. BRASSICA sp. Brassicaceae.

From Peking, China. Seeds presented by J. E. Ferguson, through W. T. Swingle, Bureau of Plant Industry. Received July 12, 1928.

P'iao ts'ai. A bitter Chinese cabbage.

77422. CITRUS SINENSIS (L.) Osbeck. Rutaceae. Orange.

From Rehoboth, Palestine. Bud wood presented by Albert Kaufmann, through A. Friedman, Palestine Jewish Colonization Association, Jaffa. Received July 14, 1928.

The Jaffa or Shamouti orange of Jaffa, Palestine, is a large oval bright-orange fruit of excellent quality, maturing from October to April. The fruit is practically seedless, the skin usually thick, and the flesh of excellent quality. This variety is the basis of the rapidly developing Palestine orange industry. Ninety-five per cent of the fruit is marketed in England.

For previous introduction see No. 75226.

77423 to 77432.

From Chosen. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received July 3, 1928.

77423. ACER sp. Aceraceae.

No. 696. Trail southwest of Onseiri, toward Shinkeiji, Outer Kongosan or Diamond Mountains, June 6, 1928. A small attractive maple with good dark-green leaves.

77424. AQUILEGIA sp. Ranunculaceae. Columbine.

No. 692. A Japanese columbine with red and yellow flowers, growing among rocks and coarse decomposed granite on the banks of a river at Choanji, Inner Kongosan or Diamond Mountains, May 31, 1928.

77423 to 77432—Continued.

77425. BERBERIS AMURENSIS Rupr. Berberidaceae. Amur barberry.

No. 697. A wild barberry growing near the river at Choanji, Inner Kongosan or Diamond Mountains, June 1, 1928. An eastern Asiatic shrub up to 10 feet high, with yellowish gray branchlets, 3-parted spines an inch long, elliptic leaves 2 to 3 inches long, 10-flowered to 25-flowered pendulous racemes, and bright-red fruits.

For previous introduction see No. 72406.

77426. (Undetermined.)

No. 688. Makaen, near Choanji, Inner Kongosan or Diamond Mountains, June 1, 1928.

77427. RODGERSIA sp. Saxifragaceae.

No. 691. A Japanese herbaceous perennial growing among rocks along the river at Choanji, Inner Kongosan or Diamond Mountains, June 1, 1928.

77428. ROSA sp. Rosaceae. Rose.

No. 699. A wild rose growing by the roadside at Atami, Shizuoka Ken, May 6, 1928.

77429 to 77432. SALIX spp. Salicaceae. Willow.

77429. SALIX sp.

No. 689. A small silky-leaved willow growing among rocks on the bank of the river at Choanji, Inner Kongosan or Diamond Mountains, June 1, 1928.

77430. SALIX sp.

No. 690. A slender willow, about 25 feet high, growing at Shimpori, Inner Kongosan or Diamond Mountains, June 1, 1928.

77431. SALIX sp.

No. 694. A willow tree, about 30 feet high, growing above Fire Dragon Falls, on the trail to Makaen, near Choanji, Inner Kongosan or Diamond Mountains, June 1, 1928.

77432. SALIX sp.

No. 695. A willow growing near Fire Dragon Falls, on the trail to Makaen, near Choanji, Inner Kongosan or Diamond Mountains, June 1, 1928.

77433. PRUNUS CAPULI Cav. Amygdalaceae. Capulin.

From Orizaba, Mexico. Seeds presented by Dr. C. A. Purpus, Zacuapam, Vera Cruz, Mexico. Received July 19, 1928.

A tropical American tree up to 40 feet high, with lanceolate long-pointed coriaceous leaves 6 to 8 inches long, stout racemes 4 to 6 inches long of small white flowers followed by nearly black globose edible fruits half an inch in diameter.

For previous introduction see No. 62688.

77434. SOLANUM MACROCARPON L. Solanaceae.

From Luchenza, Nyasaland Protectorate, Africa. Seeds presented by L. S. Norman. Received July 13, 1928.

77434—Continued.

A stout undershrub with a much-branched smooth stem and ovate-sinuate margined leaves 8 inches long. The racemose cymes, opposite the leaves, bear blue-purple flowers, 1 to 2 inches broad, which are followed by globose yellow fruits the size of an apple.

For previous introduction see No. 76688.

77435. FRAGARIA sp. Rosaceae.
Strawberry.

From Juneau, Alaska. Plants presented by the district forester, through G. M. Darrow, Bureau of Plant Industry. Received July 14, 1928.

A strawberry from the coast region of Alaska which differs from the usual form in having thinner leaves and in having the seeds more deeply embedded in the receptacle.

77436. EHRHARTA CALYCINA J. E. Smith. Poaceae.
Perennial veldt grass.

From Perth, Western Australia. Seeds presented by Elder, Smith & Co. Received July 14, 1928.

A grass 4 feet high which is popular as forage in Western Australia where it was introduced accidentally by the camel owners in fodder imported from South Africa. It is said to be very nutritious.

For previous introduction see No. 75200.

77437. EPHEDRA ALATA Decaisne. Gnetaceae.

From Algiers, Algeria, Africa. Seeds presented by Dr. L. Trabut, Government botanist, through W. T. Swingle, Bureau of Plant Industry. Received July 10, 1928.

A tall freely branching shrub with rough, green equisetumlike branches, small scalelike leaves, and inconspicuous flowers, native to northern Africa and Arabia. Of possible value as a source of ephedrine.

77438. EPHEDRA ALATA Decaisne. Gnetaceae.

From Algiers, Algeria, Africa. Seeds presented by Dr. René Maire, University of Algiers, through W. T. Swingle, Bureau of Plant Industry. Received July 17, 1928.

For previous introduction and description see No. 77437.

77439 and 77440. SOLANUM spp. Solanaceae.

From Bangkok, Siam. Seeds presented by Dr. E. D. Merrill, Dean of the College of Agriculture of the University of California, Berkeley, through W. T. Swingle, Bureau of Plant Industry. Received July 17, 1928.

77439. SOLANUM sp.

Mawangton. A tropical bush.

77440. SOLANUM sp.

A tropical vine.

77441 to 77447.

From Australia. Seeds presented by Mrs. Frieda Cobb Blanchard, University of Michigan, Ann Arbor. Received July 14, 1928.

77441 to 77447—Continued.

77441. INDIGOFERA AUSTRALIS Willd. Fabaceae. **Indigo.**

An erect Australian shrub, 2 to 4 feet high, with pinnately compound leaves and dense racemes of showy red flowers. It may be suitable for growing as an ornamental in the warmer parts of the United States.

For previous introduction see No. 61059.

77442. LINOSPADIX MONOSTACHYA (Mart.) Wendl. (*Bacularia monostachya* F. Muell.). Phoenicaceae.
Walkingstick palm.

From National Park, Macpherson Range, Queensland, at an altitude of 3,500 feet. An Australian shrub 6 to 12 feet high with stems an inch in diameter, pinnate leaves 2 to 4 feet long, flower clusters often longer than the leaves, and ovoid green fruits half an inch in diameter.

77443. MACROZAMIA sp. Cycadaceae.

From Broken Bay, north of Sydney. An Australian cycaslike plant with pinnate leaves, of value as an ornamental.

77444. OLEARIA TERETIFOLIA (Sond.) F. Muell. (*Aster teretifolius* F. Muell.). Asteraceae. **Daisytree.**

From National Park, Macpherson Range, Queensland, at an altitude of 4,000 feet. A broomlike Australian shrub up to 5 feet high, which stands clipping and might be used as a hedge plant. It is covered with masses of small white flowers which give the bush a snowlike appearance.

For previous introduction see No. 47192.

77445. PITTOSPORUM sp. Pittosporaceae.

From National Park, Macpherson Range, Queensland, at an altitude of 4,000 feet. A very pretty shrub, especially when in fruit.

77446. POTHOS LONGIPES Schott. Araceae.

From National Park, Macpherson Range, Queensland, at an altitude of 3,500 feet. A tall-climbing Australian shrub clinging by aerial roots, leaves with a winged petiole 5 or 6 inches long, and a blade usually not as long as the petiole, decurved and lanceolate. The flowers resemble those of the Indian turnip, and the ripe fruit is a cluster of red berries.

77447. SWAINSONA GALEGIFOLIA (Andrews) R. Br. (*S. coronillaefolia* Salisb.). Fabaceae. **Goatsrue senna-pea.**

From the Botanic Garden, Melbourne, Victoria. A low shrubby Australian plant with compound vetchlike leaves and scarlet-orange flowers borne on long axillary stems.

For previous introduction see No. 76945.

77448. CHAENOMELES LAGENARIA WILSONII Rehder. Malaceae.

From Elstree, Herts, England. Seeds presented by the Hon. Vicary Gibbs, Aldenham House Gardens. Received July 17, 1928.

A western Chinese shrub up to 20 feet high, with long persisting lustrous dark-green leaves and bright early-appearing salmon-pink flowers 1 to 2 inches across.

For previous introduction see No. 58605.

77449. PRUNUS MAJESTICA Koehne. Amygdalaceae.

From Benenden, Kent, England. Seeds presented by Capt. Collingwood Ingram. Received July 17, 1928.

A large handsome tree up to 70 feet tall, growing in southwestern China at an altitude of 4,000 feet. It has large broadly lanceolate-serrate leaves, small umbels of rosy to white flowers, and ovoid dark-red fruits.

For previous introduction see No. 58013.

77450. EPHEDRA DISTACHYA L. (E. *vulgaris* Rich.) Gnetaceae. **Common jointfir.**

From Peshawar, Northwest Frontier Province, India. Seeds presented by Nawazieh Ali, Professor of Botany, through John R. Ives, American vice consul, Karachi, India. Received July 23, 1928.

A low procumbent shrub, native to southern Europe and Asia, with erect dark-green branches, scalelike leaves, inconspicuous flowers, and globose red berries. A possible source of ephedrin.

For previous introduction see No. 61418.

77451. CYTISUS PALMENSIS (Christ) Hutchinson. Fabaceae. **Tagasaste.**

From Rabat, Morocco. Seeds presented by Dr. E. Miege, Station de Sélection et d'Essai de Semences. Received July 23, 1928.

A shrubby Canary Island legume with silvery gray leaves, which is valuable as a forage crop.

For previous introduction see No. 65584.

77452 and 77453. HEDYSARUM spp. Fabaceae.

From Oran, Algeria. Seeds presented by Prof. A. Faure. Received July 20, 1928.

77452. HEDYSARUM CAPITATUM Desf.

An annual Algerian legume with purple flowers, of possible value for forage or green manure.

For previous introduction see No. 66143.

77453. HEDYSARUM PALLIDUM Desf.

A decumbent perennial legume, native to northern Africa, with compound pubescent leaves, clusters of purple-streaked white flowers, and spiny articulated pods. It has been recommended for green manure in olive orchards.

For previous introduction see No. 66146.

77454. INGA SPECTABILIS Willd. Mimosaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Gardens. Received May 7, 1928. Numbered July, 1928.

A large handsome tropical American tree with leaves composed of two pairs of wide coriaceous leaflets, spikes of greenish white flowers, and enormous thick pods containing an edible whitish pulp.

77455 and 77456. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director of the Botanic Gardens. Received July 26, 1928.

77455. Variety *breviviolaceum*.

77456. Variety *viride*.

77457. FLACOURTIA INDICA (Burm. f.) Merr. (*F. ramontchi* L'Herit.). Flacourtiaceae. **Ramontchi.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received July 24, 1928.

A spiny arborescent Philippine shrub 20 feet high, with crenate leaves, small white flowers, and smooth dark-purple fruits containing a sweet juicy pulp.

For previous introduction see No. 61648.

77458. GOSSYPIUM PERUVIANUM Cav. Malvaceae. **Peruvian cotton.**

From Chira Valley, Peru. Seeds obtained through O. F. Cook, Bureau of Plant Industry. Received July 26, 1928.

A cotton which grows to a height of 12 feet.

For previous introduction see No. 73132.

77459. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Herradura, Cuba. Cuttings presented by F. S. Earle. Received July 2, 1928.

Creole.

77460. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae. **Lime.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received July 28, 1928.

For previous introduction and description see No. 77412.

77461 to 77465.

From Omsk, Russia. Seeds presented by S. Maskovsky, Director of the West Siberian Agricultural Experiment Station, through H. N. Vinall, Bureau of Plant Industry. Received July 27, 1928.

Siberian varieties.

77461. BROMUS INERMIS Leyss. Poaceae. **Bromegrass.**

No. 4040.

77462. MEDICAGO FALCATA L. Fabaceae. **Yellow-flowered alfalfa.**

No. 1694.

77463. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

No. 1450.

77464. MELILOTUS ALBA Desr. Fabaceae. **White sweetclover.**

No. 8079.

77465. VICIA CRACCA L. Fabaceae. **Cow vetch.**

No. 8081.

77466 to 77472. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Jerusalem, Palestine. Seeds presented by A. Grasovsky, southern inspectorate of agriculture. Received July 30, 1928.

77466. *Frangi.*

77467. *Klabi.*

77468. *Lozi.* A variety with sweet kernels.

77469. *Mawi.*

77470. *Mustekawi.* A variety with bitter kernels.

77471. *Mustekawi.* A variety with sweet kernels.

77472. *Wardi.*

77473. BRACHIARIA BRIZANTHA (Hochst.) Stapf. Poaceae. **Grass.**

From Luchenza, Nyasaland Protectorate, Africa. Seeds presented by L. S. Norman. Received July 18, 1927. Numbered August, 1928.

A tall tropical African perennial grass, up to 6 feet high, with a short stout rhizome, erect stems, and very narrow leaves up to 15 inches long. It is one of a series of nine grasses selected by T. D. Maitland, former botanist of Uganda, as being the most promising indigenous grasses for forage there.

For previous introduction see No. 75293.

77474. BRACHIARIA BRIZANTHA (Hochst.) Stapf. Poaceae. **Grass.**

From east Africa. Seeds collected by L. W. Kephart and R. L. Piemeisel, agricultural explorers, Bureau of Plant Industry. Received March 17, 1928. Numbered August, 1928.

No. 386. Government plantation, Kampala, Uganda.

For previous introduction and description see No. 77473.

77475. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Tucuman, Argentina. Seeds presented by Dr. W. E. Cross, Director, Estación Experimental Agrícola. Received August 1, 1928.

Paraná. A variety from Argentina.

77476 and 77477.

From Jerusalem, Palestine. Bulbs and seeds presented by E. R. Sawer, Department of Agriculture, Forests, and Fisheries. Received August 2, 1928.

77476. COLCHICUM DECAISNEI Boiss. Melanthiaceae.

Seeds and bulbs. This variety, native to Syra, differs very little from *Colchicum laetum*, which in turn is much like *C. autumnale*. The rosy lilac flowers appear without the leaves in late October.

77477. CROCUS HYEMALIS Boiss. and Blanche. Iridaceae.

Seeds of a late autumn or winter-flowering crocus common around Jerusalem. The flowers are white, deep orange in the throat, with varying feathers of deep purple on the backs of the outer segments.

77478 to 77480. FICUS CARICA L. Moraceae. **Fig.**

From Grande Kabylie, Algeria, Africa. Scions presented by E. Rolland, Comice Agricole de Tizi Ouzou. Received February 4, 1926. Numbered August, 1928.

77478. *Carma adjar.*

77479. *Sultane.*

77480. *Sultane du Marabout.*

77481. FICUS CARICA L. Moraceae. **Fig.**

From Italy. Bud sticks presented by Dr. Mario Calvino, San Remo. Received August 24, 1926. Numbered August, 1928.

Pissalutto. Bud sticks from the best plant of this variety growing in the Hanbury Botanical Garden of La Mortola, Ventimiglia. It is an old Italian variety cultivated in Ventimiglia and San Remo and is the best variety for fresh and dried fruit.

77482. FICUS CARICA L. Moraceae. **Fig.**

From Palestine. Cuttings presented by Amram Khazanoff, the Palestine Jewish Colonization Association, Haifa. Received May 13, 1927. Numbered August, 1928.

Kharrobbi. From the Ram Allah Mountains of Judea.

77483. PHALARIS TRUNCATA GUSS. Poaceae. **Grass.**

From Algiers, Algeria, Africa. Seeds presented by Dr. L. Trabut, Government botanist. Received August 6, 1928.

A perennial grass, about 2 feet high, native to the Mediterranean region. The flowers are borne in a dense spike like timothy.

For previous introduction see No. 46952.

77484. EXACUM ZEYLANICUM Roxb. Gentianaceae.

From Peradeniya, Ceylon. Seeds presented by F. A. Stockdale, Director, Department of Agriculture. Received August 7, 1928.

An erect East Indian annual a foot high, with leaves at the base and a terminal cluster of large deep-purple flowers having bright-orange stamens.

For previous introduction see No. 66835.

77485 and 77486. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Zanzibar, Africa. Seeds presented by V. H. Kirkham, Director, Agricultural Department. Received August 7, 1928.

77485. A wild variety.

77486. A cultivated variety.

77487. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Eala, Belgian Congo, Africa. Seeds presented by E. Wirion, Director, Botanic Garden. Received August 6, 1928.

A violet-fruited Congo variety.

77488. MACARANGA GRANDIFOLIA (Blanco) Merr. Euphorbiaceae.

77488—Continued.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, through Peter Bisset, Bureau of Plant Industry. Received July 12, 1928.

A Philippine ornamental, with large leaves like an Anthurium which may become a very showy conservatory plant.

77489. POLYTRIAS AMAURA (Buehse) Kuntze (*P. praemorsa* Hack.). Poaceae. **Java grass.**

From Port of Spain, Trinidad, British West Indies. Plants presented by W. G. Freeman, Director of the Trinidad Department of Agriculture. Received June 6, 1928. Numbered September, 1928.

A common lawn and pasture grass native to low altitudes in Java.

For previous introduction see No. 32111.

77490 and 77491. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Honolulu, Hawaii. Seeds presented by Prof. F. G. Krauss, University of Hawaii. Received September 19, 1928.

77490. *Variety New Era strain D.*

77491. *Variety New Era strain X.*

77492. SOLANUM sp. Solanaceae.

From Java. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila, Philippine Islands. Received September 24, 1928.

Kubiu. A Brazilian plant said to be used as a vegetable in Java. It is probably very tender and does not endure frost.

77493 to 77495. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

From Sydney, New South Wales, Australia. Seeds presented by G. D. Ross, Undersecretary, Department of Agriculture. Received September 21, 1928.

77493. *Cowra crown.*

77494. *Hawkesbury.*

77495. *Triangle.*

77496 to 77539. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Sydney, New South Wales, Australia. Cuttings presented by P. H. Goldfinch, acting general manager of the Colonial Sugar Refining Co., at the request of E. W. Brandes, Bureau of Plant Industry. Received September 21, 1928.

Mr. Goldfinch says that these cuttings belong to the *21 N. G.* series, a designation which indicates that they were collected in New Guinea in 1921.

77496. No. 1.

77497. No. 2.

77498. No. 3.

77499. No. 4.

77500. No. 5.

77501. No. 6.

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77540 to 77582.

From Nelson, New Zealand. Seeds presented by A. Wilkinson, Hon. Secretary and Treasurer of the New Zealand (Nelson) Alpine and Rock Garden Society. Received September 13, 1928.

77540. ACAENA sp. Rosaceae.

A herbaceous perennial, native to New Zealand, with alternate, pinnate leaves having incised leaflets and small flowers in terminal or interrupted spikes.

77541. ALECTRYON EXCELSUM Gaertn. Sapindaceae. **Titoki.**

A handsome New Zealand tree up to 60 feet high and 2 feet in diameter, with pinnately compound leaves having four to six pairs of obliquely lanceolate leaflets 4 inches long, brownish silky beneath, and panicles a foot long of small flowers without petals but having large dark-red anthers. The tough elastic wood is used for ax handles, etc.

For previous introduction see No. 73992.

77540 to 77582—Continued.

77542. ARISTOTELIA FRUTICOSA Hook. f. Elaeocarpaceae.

An erect or decumbent much-branched shrub, 3 to 8 feet high, native to New Zealand. The coriaceous leaves vary from linear to obovate and are entire, crenate, serrate, or lobed. The small flowers are solitary or in small racemes and are followed by small yellowish berries.

77543. ARTHROPODIUM CIRRHATUM (Forst. f.) R. Br. Liliaceae.

A herbaceous perennial up to 3 feet high, with shining grasslike leaves and showy panicles of white flowers an inch across, having the stamens covered with pink bristles.

For previous introduction see No. 77173.

77544 to 77546. ASTELIA spp. Liliaceae.

77544. ASTELIA CUNNINGHAMII Hook. f.

A densely tufted epiphytic or terrestrial herb, native to New Zealand. The linear leaves are about 5 feet long, and the small reddish yellow to maroon flowers are borne in large panicles on scapes 1 to 3 feet high and covered with white silky hairs. The fruits are small red globose berries.

77545. ASTELIA NERVOSA Banks and Soland.

A stout densely tufted New Zealand perennial often forming extensive masses in moist forests on swampy ground. The spreading lanceolate leaves are 3 to 8 feet long with the midrib and several other nerves colored red. The fragrant greenish black flowers are borne in large panicles on scapes 1 to 2 feet high and are followed by bright orange-yellow berries.

77546. ASTELIA PETRIEI Cockayne.

An attractive densely tufted perennial native to New Zealand, where it forms large patches in alpine meadows. The long-pointed sword-shaped leaves are 1 to 3 feet long, smooth and shining above and silvery white beneath. The inconspicuous flowers are in short panicles hidden among the leaves.

77547. BULBINELLA HOOKERI (Colenso) Cheeseman. Liliaceae.

A New Zealand herbaceous perennial varying in size from 3 to 4 inches up to 3 feet. The numerous glaucous green leaves are linear, and the loose racemes of bright-yellow flowers are on slender scapes up to 10 inches high.

77548. CASSINIA VAUVILLIERSII (Homb. and Jacq.) Hook. f. Asteraceae.

An erect closely branched New Zealand shrub up to 8 feet high, with narrowly oblong leathery leaves half an inch long, densely white tomentose beneath, and dense terminal corymbs of white flowers.

For previous introduction see No. 76564.

77549 to 77551. CELMISIA spp. Asteraceae.

77540 to 77582—Continued.

77549. CELMISIA ARMSTRONGII Petrie.

A herbaceous perennial, native to New Zealand, with short stout stems crowned by radiating sword-shaped leaves, 18 inches long, having an orange midrib and covered with satiny tomentum. The heads of white flowers, 1 to 2 inches broad, are borne on white cottony scapes about the length of the leaves.

77550. CELMISIA CORIACEA (Forst. f.) Hook. f.

A herbaceous perennial, native to New Zealand, with a short stout stem crowned with lanceolate leaves 1 to 2 feet long from which arise several stout woolly scapes 3 feet high bearing heads of white flowers more than 3 inches broad.

77551. CELMISIA SPECTABILIS Hook. f.

A New Zealand herbaceous perennial, often forming large patches, with short stout stems and numerous linear-oblong thick leaves, 6 inches long, covered with silvery hairs above and densely matted pale buff wool beneath. The several stout cottony scapes are longer than the leaves and bear white flower heads 1 to 2 inches broad.

77552. CHORDOSPARTIUM STEVENSONI Cheeseman. Fabaceae.

A leafless shrub or small tree up to 20 feet high, native to New Zealand, with long slender pendulous branches and racemes, 1 to 2 inches long, of small purple flowers.

77553. COPROSMA RUGOSA Cheeseman. Rubiaceae.

A densely branched New Zealand shrub, 4 to 10 feet high, with yellowish brown branchlets, opposite or fascicled linear leaves less than half an inch long, small axillary flowers, and broadly oblong translucent pale-blue berries half an inch long.

77554 to 77556. DIANELLA INTERMEDIA Endl. Liliaceae.

A herbaceous perennial, native to New Zealand, with numerous sword-shaped leaves, 3 feet long, crowded at the base of a scape 2 feet high, which bears a spreading panicle of small purplish flowers having bright-orange anthers, and followed by broadly oblong blue berries.

77554. [No data.]

77555. A pale blue-berried variety.

77556. A dark blue-berried variety.

77557. DRACOPHYLLUM TRAVERSII Hook. f. Epacridaceae.

A New Zealand tree up to 30 feet high and 2 feet in diameter, with leathery lanceolate leaves 2 feet long and terminal spikelike panicles, 1 to 2 feet long, of reddish flowers.

77558. DRACOPHYLLUM URVILLEANUM A. Rich. Epacridaceae.

A shrub 4 to 8 feet high, native to New Zealand, with slender erect branches, very narrowly linear leathery leaves 5 inches long, and small white or red flowers in racemes on short lateral branchlets.

77559. GAULTHERIA OPPOSITIFOLIA Hook. f. Ericaceae.

77540 to 77582—Continued.

A New Zealand shrub, 2 to 8 feet high, with leathery cordate leaves 1 to 3 inches long and compound axillary and terminal racemes of small white flowers.

For previous introduction see No. 48166.

77560. GAYA LYALLII (Hook. f.) Baker f. Malvaceae.

One of the most beautiful of the New Zealand trees, up to 30 feet high, graceful and spreading, with the growing parts covered with stellate hairs. The cordate-crenate leaves are 2 to 4 inches long on slender petioles, and the large white flowers, an inch across, are borne in axillary clusters.

For previous introduction see No. 48167.

77561. HYMENANTHERA CRASSIFOLIA Hook. f. Violaceae.

A low rigid prostrate or erect densely branched shrub, native to New Zealand, with grayish white shiny branches, thick leathery spatulate leaves with entire, sinuate, or lobed margins, small flowers, and broadly oblong purplish berries.

77562. HYMENANTHERA DENTATA ALPINA Kirk. Violaceae.

A New Zealand shrub 1 to 2 feet high forming a densely compact mass of spiny branches, with very small thick leathery leaves, minute flowers, and globose berries.

77563. LIBERTIA GRANDIFLORA (R. Br.) Sweet. Iridaceae.

A densely tufted herbaceous perennial, native to New Zealand, with stiff leathery linear leaves up to 3 feet long, and a flowering stem as tall as the leaves bearing a branching panicle of white flowers each an inch broad.

For previous introduction see No. 77190.

77564. LIBERTIA IXIOIDES (Forst. f.) Spreng. Iridaceae.

A New Zealand herbaceous perennial very similar to *Libertia grandiflora*, but with the leaves 1 to 2 feet long and the flowers one-half to 1 inch broad.

77565. LINUM MONOGYNUM Forst. f. Linaceae. Flax.

A smooth perennial herb 1 to 2 feet high, native to New Zealand, with scattered linear-lanceolate leaves an inch long and large white flowers an inch across in terminal corymbs.

For previous introduction see No. 52371.

77566. METROSIDEROS PERFORATA (Forst.) A. Rich. Myrtaceae.

A tall woody climber, native to New Zealand, with sessile leathery ovate to orbicular leaves half an inch long and leafy terminal panicles of small white flowers.

77567. MYRTUS OBCORDATA (Raoul) Hook. f. Myrtaceae.

A New Zealand shrub up to 15 feet high, with slender spreading branches, opposite leathery obcordate leaves half an inch long, solitary axillary white flowers, and broadly ovoid dark-red or violet berries a quarter of an inch long.

77568. NOTHOPANAX ARBOREUM (Forst.) Seem. Araliaceae.

77540 to 77582—Continued.

A round-headed New Zealand tree up to 25 feet high, with stout brittle branches. The five to seven palmately foliolate leathery leaves are made up of serrate-oblong leaflets 4 to 7 inches long. The flowers are in broad terminal compound umbels and are followed by purplish black fruits broader than long and more than a quarter of an inch in diameter.

For previous introduction see No. 43599.

77569 to 77571. OLEARIA spp. Asteraceae. Daisytree.

77569. OLEARIA AVICENNIAEFOLIA (Raoul) Hook. f.

A small branching New Zealand tree up to 20 feet high, with white tomentose branchlets, alternate entire lanceolate leaves 2 to 4 inches long, and large much-branched corymbs of small cylindrical flower heads.

77570. OLEARIA ILICIFOLIA Hook. f.

A shrub or small tree, 5 to 20 feet high, with a strong musky odor, native to New Zealand. The alternate rigid leathery linear-lanceolate leaves are 2 to 4 inches long and clothed beneath with thin yellowish white tomentum. The numerous campanulate flower heads are in large rounded much-branched corymbs.

77571. OLEARIA NUMMULARIFOLIA Hook. f.

A closely branched New Zealand shrub with stout viscid branchlets, alternate coriaceous orbicular leaves half an inch long, and small solitary flower heads.

77572. OURISIA CROSBYI Cockayne. Scrophulariaceae.

A slender herbaceous perennial a foot high, native to New Zealand, with radical leaves having petioles 2 inches long and thin oblong blades 1 to 2 inches long. The clusters of three to five small white flowers with yellow throats are borne on slender stems.

77573. PACHYSTEGIA INSIGNIS (Hook. f.) Cheeseman (*Olearia insignis* Hook. f.). Asteraceae.

A robust spreading New Zealand shrub, 6 to 9 feet high, with stout densely tomentose branches, thick leathery oblong entire leaves, 3 to 7 inches long, white tomentose beneath, and large hemispherical heads, 3 inches in diameter, of white flowers on penduncles a foot long.

77574. PARSONSIA HETEROPHYLLA A. Cunn. Apocynaceae.

A tall slender branching New Zealand vine, woody at the base, with coriaceous leaves varying from linear to obovate 2 to 4 inches long, and terminal and axillary many-flowered cymes of small fragrant white flowers, followed by cylindrical pods 6 inches long.

77575. PITTOSPORUM CORNIFOLIUM A. Cunn. Pittosporaceae.

A slender sparingly branched epiphytic New Zealand shrub 2 to 5 feet high, with entire coriaceous lanceolate to obovate leaves 2 to 3 inches long and 1-flowered to 3-flowered umbels of small flowers followed by ovoid capsules which in ripening open and display the orange-colored interior and the black seeds.

77540 to 77582—Continued.

77576. PITTOSPORUM DALLII Cheeseman. Pittosporaceae.

A round-topped tree up to 18 feet high, native to New Zealand, with sharply toothed oblong leathery leaves 2 to 4 inches long and dense terminal compound clusters of fragrant white flowers half an inch broad.

77577. POMADERRIS APETALA Labill. Rhamnaceae.

A shrub or small tree up to 15 feet high, native to New Zealand and Australia, with oblong-ovate crenulate leaves 4 inches long, having gray or whitish stellate pubescence beneath and axillary and terminal panicles 3 to 7 inches long of small flowers without petals. The foliage is said to be eaten readily by stock.

For previous introduction see No. 57935.

77578. RHIPOGONUM SCANDENS Forst. Smilacaceae.

A tall climbing New Zealand shrub with oblong coriaceous leaves 3 to 5 inches long, small greenish flowers in axillary and terminal clusters, followed by bright-red globose berries. The long tough elastic stems have been used to make baskets.

77579. SENECIO ELAEAGNIFOLIUS Hook. f. Asteraceae.

A spreading shrub 4 to 10 feet high, native to New Zealand, with ovate leathery leaves, 2 to 5 inches long, pale buff tomentose beneath, and stout branched terminal panicles of small flower heads.

77580. SENECIO PERDICIOIDES Hook. f. Asteraceae.

A round-topped New Zealand shrub 2 to 6 feet high, with toothed oblong leaves 2 inches long and leafy corymbs of top-shaped yellow flower heads.

77581. VERONICA TRAVERSII Hook. f. Scrophulariaceae.

A small compact New Zealand shrub 2 to 5 feet in diameter, with spreading leathery oblong leaves an inch long and racemes of small white flowers at the tips of the branches.

77582. VERONICA sp. Scrophulariaceae.

A subalpine veronica of which there are more than 100 species native to New Zealand, varying from creeping vines to small trees, with flowers in axillary or terminal racemes, spikes, or panicles.

77583. ILEX CORNUTA Lindl. and Paxt. Aquifoliaceae. **Chinese holly.**

From Washington, D. C. Plants grown from cuttings collected by Paul Russell, Bureau of Plant Industry. Received September 5, 1928.

A form of the Chinese holly with nearly spineless leaves. These cuttings were taken from a pistillate shrub about 9 feet high, growing in the National Botanic Garden.

77584 to 77594.

From Rhenock, Sikkim State, India. Seeds and bulbs presented by R. B. and D. S. Pradhans, the Chandra nursery. Received September, 1928.

77584 to 77594—Continued.

77584. CINCHONA SUCCIRUBRA Pavon. Rubiaceae.

Seeds of a Peruvian tree up to 40 feet high, with broad leaves. It is suitable for cultivation on hillsides in frost-free regions. The bark is used in the manufacture of quinine.

For previous introduction see No. 60293.

77585. LILIUM GIGANTEUM Wall. Liliaceae. **Giant lily.**

Seeds of a Himalayan lily which grows at altitudes between 7,500 and 9,000 feet, close to the surface in rich black mold, where it is covered with snow from November to April. The smooth hollow stems, 6 to 9 feet high, are sometimes used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large white fragrant flowers, often 12 to a raceme, the perianth tube is slightly greenish and the inner surfaces of the segments are tinged with deep purple.

For previous introduction see No. 76902.

77586 to 77588. LYCORIS spp. Amaryllidaceae. **Cluster-amaryllis.**

77586. LYCORIS AUREA (L'Her.) Herbert.

A Chinese bulbous perennial with sword-shaped leaves which die down before the appearance of the golden-yellow flowers, 3 to 4 inches across, borne in an umbel on a scape 1 to 3 feet tall.

77587. LYCORIS SANGUINEA Maxim.

A Japanese bulbous perennial with linear leaves dying down before the red flowers appear in an umbel on a scape 12 to 18 inches high.

77588. LYCORIS SQUAMIGERA Maxim. **Hardy cluster-amaryllis.**

A Japanese bulbous perennial with linear leaves which die down before the appearance of the rosy lilac fragrant flowers.

77589. MERENDERA SOBOLIFERA Fisch. and Mey. Melanthiaceae.

Bulbs of a small fragile perennial, native to Asia Minor and Persia, with three linear leaves and one to three lilac flowers 1 to 2 inches across.

77590 to 77592. NERINE spp. Amaryllidaceae.

77590. NERINE FLEXUOSA (Jacq.) Herbert.

Variety *alba*. A white form of this South African bulbous perennial with four to six bright-green linear leaves a foot long and a scape 2 to 3 feet high, bearing an umbel of 10 to 20 pale-pink flowers an inch long.

77591. NERINE PUDICA Hook. f.

A South African bulbous perennial with four to six glaucous-linear leaves 8 inches long and a scape 12 to 18 inches high, bearing an umbel of four to six white flowers.

77584 to 77594—Continued.

77592. NERINE SARNIENSIS (L.) Herbert. **Guernsey-lily.**

A bulbous perennial, native to South Africa, with bright-green linear leaves a foot long, appearing after the bright-crimson flowers which are borne in an umbel of 10 to 12 on a scape 12 to 18 inches high.

For previous introduction see No. 67972.

77593. PHALOCALLIS HERBERTII (Herbert) Kuntze (*Cypella herbertii* Herbert). Iridaceae.

Bulbs of a perennial, native to Argentina, with linear plaited leaves a foot long and a branching scape 2 to 3 feet high, with yellow flowers 3 inches across.

For previous introduction see No. 33997.

77594. PRUNUS CERASOIDES D. Don (*P. puddum* Roxb.). Amygdalaceae.

77584 to 77594—Continued.

Sikkim cherry. Seeds of an Indian cherry, native to the temperate slopes of the Himalayas, with sharply serrate lanceolate leaves 3 to 5 inches long, umbels of pendulous campanulate rosy red to white flowers, and red fruits, half an inch long, having a scanty red or yellowish acid flesh.

For previous introduction see No. 76908.

77595. DILLENIA MINDANAENSIS Elmer. Dilleniaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received September 14, 1928.

An ornamental Philippine tree with large dark-green coarsely serrated leaves, handsome yellow flowers, and smooth green acid fruits the size of an apple. The thick fleshy sepals and the interior of the fruits are edible and are used for making preserves.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 97

Washington, D. C. Issued April, 1930

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1928 (NOS. 77596 TO 78508)

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INTRODUCTORY STATEMENT

This inventory for the period from October 1 to December 31, 1928, contains a large amount of material which was brought in for experimental purposes, and will affect the final cooperative experiments very little, if at all. This is largely true of the plants obtained by the various expeditions that have been in the field for specific purposes.

From R. K. Beattie, who is still in the Orient, have been received considerable collections of Japanese persimmon varieties (*Diospyros kaki*, Nos. 78487 to 78503), *Castanopsis* spp. (Nos. 78312 to 78316), and Japanese chestnuts (*Castanea crenata*, Nos. 78003 to 78031), as well as miscellaneous ornamentals and trees.

From the Brandes collecting trip in New Guinea has been brought back a large collection of sugarcanes (*Saccharum* spp., Nos. 77710 to 77816).

From Madagascar, Charles F. Swingle has brought back not only *Euphorbia intisy* (No. 78169), a source of rubber, but a large miscellaneous collection of other species, some of them possibly also sources of rubber, and others merely of interest as ornamentals. Among the latter the most curious and interesting are the Kalanchoes (Nos. 77907 to 77917, 78423 to 78438, and possibly others), which will probably be useful out of doors in the warmest parts of the United States and as pot plants throughout the rest of the country. This is particularly true at the present time when succulents are much in vogue.

A large collection of pineapples (*Ananas sativus*, Nos. 77629 to 77639) was brought together from the Philippine Islands, Federated Malay States, East Indies, and Porto Rico for the Hawaii Agricultural Experiment Station.

In addition there are numerous collections of ornamentals obtained mostly by purchase from European sources for comparative varietal studies. Among this group might be mentioned witch-hazel, flowering quince, ceanothus, lilac, philadelphus, box, deutzia, and clematis.

Of possible interest to physicians is the Siamese *Solanum sanitwongsei* (No. 77618), said to be valuable in the treatment of diabetes, and *Ephedra gerardiana* (No. 77607), and *E. distachya* (No. 77619), possible sources of ephedrine.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., January 4, 1930.

94537—30——1

INVENTORY[1]

77596. RHUS TRILOBATA Nutt. Anacardiaceae.

From Indian Head, Saskatchewan, Canada. Seeds presented by Norman Ross, chief of the tree-planting division of the Forest Nursery Station, through Knowles A. Ryerson, Bureau of Plant Industry. Received October 8, 1928.

An upright shrub, 2 to 4 feet high, native to Canada and the northern United States. It has three crenately lobed leaflets, inconspicuous yellowish flowers, and short panicles of bright-red fruits. These seeds were collected on a dry exposed hillside.

77597. CLEMATIS TANGUTICA (Maxim.) Korsh. Ranunculaceae.

Golden clematis.

From Dropmore, Manitoba, Canada. Seeds presented by F. L. Skinner. Received October 9, 1928.

A woody vine, climbing to 10 feet, native to northwest China, with once or twice pinnate leaves having lanceolate-serrate, bright-green leaflets and usually solitary bright-yellow flowers 4 inches across.

For previous introduction see No. 63353.

77598. AVENA SATIVA L. Poaceae.

Oats.

From Sporen, Germany. Seeds presented by Alfred Griesing. Received October 9, 1928.

Original *Griesings Sporen Winterhafer.*

77599. CITRUS MIARAY Wester. Rutaceae.

Miaray.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received October 9, 1928.

A handsome ornamental Philippine tree suggested as a stock for cultivated citrus fruits. It has slender drooping willowy branches, dark-green leaves, and fruits resembling the lime in appearance and flavor.

For previous introduction see No. 46732.

77600 to 77606.

From New Plymouth, New Zealand. Seeds purchased from Duncan & Davies. Received October 8, 1929.

77600. CLEMATIS INDIVISA Willd. Ranunculaceae.

A large woody climber, native to New Zealand, with three coriaceous ovate leaflets 4 inches long, and axillary panicles of large white flowers 4 inches across.

77601. COROKIA CHEESEMANII H. Carse. Cornaceae.

A slender twiggy evergreen New Zealand shrub up to 12 feet high, with spreading branches, oblong leaves an inch long, silvery tomentose beneath, small clusters of yellow flowers, and broadly oblong bright-red fruits a quarter of an inch long. The whole plant is somewhat like an evergreen *Cornus mas.*

77602. COROKIA COTONEASTER Raoul. Cornaceae.

A dense shrub, 4 to 8 feet high, native to New Zealand, with rigid tortuous branches, evergreen orbicular leaves an inch across suddenly narrowed into broad flat petioles, clusters of small yellow flowers, and red fruits.

For previous introduction see No. 72251.

77603. ELAEOCARPUS DENTATUS (Forst.) Vahl. Elaeocarpaceae.

A round-headed New Zealand tree up to 60 feet high, with a straight trunk sometimes 3 feet in diameter, alternate oblong coriaceous leaves 4 inches long, silky racemes of drooping white flowers half an inch across, and small ovoid purplish-gray fruits.

77604. ENTELEA ARBORESCENS R. Br. Tiliaceae.

A New Zealand shrub or small tree 20 feet high, with the growing parts covered with soft stellate hairs. The alternate cordate leaves, nearly a foot across, are

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in, so that definite identification can be made.

77600 to 77606—Continued.

on petioles 8 inches long; the white flowers, an inch in diameter, are in erect cymes, and the globose pods are covered with long rigid bristles.

For previous introduction see No. 51047.

77605. MELICOPE TERNATA Forst. Rutaceae.

A small much-branched New Zealand tree up to 20 feet high, with opposite leaves having three oblong leaflets 4 inches long, small panicles of greenish flowers, and small wrinkled fruits which open and display the shining black seeds.

77606. METROSIDEROS VILLOSA J. E. Smith. Myrtaceae.

A freely branching tree, native to New Zealand, up to 60 feet high and 4 feet in diameter, with coriaceous broadly ovate gray-green leaves 2 inches long, white tomentose beneath, and terminal cymes of scarlet flowers, conspicuous for their long scarlet stamens as in the bottlebrushes.

77607. EPHEDRA GERARDIANA **Wall.** Gnetaceae.

From Chakrata, United Provinces, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College, Dehra Dun. Received October 11, 1928.

A stiff erect leafless shrub, 2 to 4 feet high, native to India, with green branches, inconspicuous flowers, and bright-red fruits. A possible source of ephedrine.

77608 to 77612. EUCALYPTUS spp. Myrtaceae.

From Richmond, Australia. Seeds presented by F. H. Baker. Received October 6, 1928.

77608. EUCALYPTUS AMYGDALINA Labill. **Messmate gum.**

A variety of the almond eucalypt, which is a tall Australian tree up to 300 feet high, with lanceolate leaves 4 inches long, crowded umbels of small flowers, and hemispheric fruits a quarter of an inch broad. The leaves have a strong odor of peppermint and are rich in oil.

For previous introduction see No. 38723.

77609. EUCALYPTUS BOTRYOIDES J. E. Smith. **Bangalay.**

A tall handsome tree, native to Australia, with beautiful dark-green horizontal lanceolate leaves, umbels of small sessile flowers, and obovoid fruits. Used as a windbreak and as a shade tree. The wood is hard, tough, and durable.

77610. EUCALYPTUS LONGIROSTRIS F. Muell. (*E. rostrata* Schlecht., not Cav.). **Creek gum.**

A tall Australian tree up to 200 feet high, with smooth dark-gray bark, narrowly lanceolate leaves 6 inches or more long, stalked umbels of small flowers attractive to bees, and globular fruits with conical tops. The heavy red wood is durable both above and below the ground and is used for railroad ties, piles, and fence posts.

For previous introduction see No. 38725.

77608 to 77612—Continued.

77611. EUCALYPTUS PATENS Benth.

An Australian tree up to 100 feet high, with falcate-lanceolate leaves 6 inches long, short panicles of small flowers, and flat-topped globular fruits. The tough durable wood is used by wheelwrights.

For previous introduction see No. 76868.

77612. EUCALYPTUS VIMINALIS Labill. **Manna gum.**

A graceful Australian tree up to 300 feet high, with rough bark from which exudes the honeylike substance which gives the tree its name of manna gum. The leaves are lanceolate and falcate; the flowers are in threes and are attractive to bees; and the fruits are flattened globose with sharp-pointed tops. The wood is used only for rough building purposes.

For previous introduction see No. 38729.

77613 and 77614.

From Morden, Manitoba, Canada. Seeds and cuttings presented by W. R. Leslie, superintendent of the Experimental Station for Southern Manitoba, through Knowles A. Ryerson, Bureau of Plant Industry. Received October 15, 1928.

77613. ACER GINNALA Maxim. Aceraceae. **Amur maple.**

Seeds of a shrub or small tree up to 25 feet high, native to northeastern Asia, with lustrous dark-green 3-lobed serrate leaves, long-stalked panicles of yellowish flowers, and winged fruits, which are conspicuously red during the summer. The leaves turn bright red in autumn.

For previous introduction see No. 75664.

77614. SAMBUCUS RACEMOSA L. Caprifoliaceae. **European red elder.**

Cuttings of a variety of the red-berried elder with very finely dissected leaves.

77615. SPIRAEA FORMOSANA **Hayata.** Rosaceae. **Spirea.**

From Taiwan, Japan. Plants collected by H. H. Bartlett, director of the botanical gardens and arboretum of the University of Michigan, Ann Arbor, Mich. Received October 26, 1928.

A shrub up to 4 feet high, with ovate doubly serrate leaves and small pink flowers in compound corymbs. It is closely related to *Spiraea japonica* and may be only a form of that species. Native to Taiwan.

77616. CARPOTROCHE BRASILIENSIS (Raddi) Endl. Flacourtiaceae.

From Vicosa, Minas Geraes, Brazil. Seeds presented by P. H. Rolfs, Escola Superior de Agricultura e Veterinaria de Minas Geraes. Received January 17, 1927. Numbered in December, 1928.

A tropical tree native to central Brazil. A sirup said to cure leprosy and an ointment used for skin affections are prepared from the seeds.

For previous introduction see No. 74653.

77617. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

77617—Continued.

From Santiago de las Vegas, Cuba. Cuttings presented by Dr. Gonzalo M. Fortun, director, Estacion Experimental Agronomica. Received October 25, 1928.

A Cuban variety.

77618. SOLANUM SANITWONGSEI Craib. Solanaceae.

From Bangkok, Siam. Seeds presented by Dr. A. Kerr, director of the botanical section of the Ministry of Commerce and Communications, through Prof. E. B. Babcock, College of Agriculture, University of California, Berkeley, and G. F. Reddish, Food, Drug, and Insecticide Administration. Received October and November, 1928.

A Siamese shrub about 3 feet high, with small racemes of bluish flowers and orange-colored fruits. It is said to be of value in the treatment of diabetes.

77619. EPHEDRA DISTACHYA L. (*E. vulgaris* Rich.). Gnetaceae. **Common jointfir.**

From Taru Jabba, P. O. Peshawar, Northwest Frontier Province, India. Seeds presented by A. M. Mustafa, agricultural officer, through Renwick S. McNiece, American consul, Karachi, India. Received October 25, 1928.

A low-growing, rigid-tufted shrub, with erect green leafless branches and small red fruits. A possible source of ephedrine. Native to Europe and Asia.

For previous introduction see No. 77450.

77620. STYRAX OFFICINALIS L. Styracaceae. **Snowbell.**

From Brignoles, France. Seeds presented by Dr. R. Salgues, Director, Brignoles Botanic Station. Received October 24, 1928.

A handsome shrub or low tree, 20 feet high, with hairy, broadly oval leaves and numerous white flowers, about three-fourths of an inch long, in small clusters. It is native to Europe and Asia Minor.

For previous introduction see No. 66969.

77621. CHAMAEDOREA TEPEJILOTE Liebm. Phoenicaceae. **Palm.**

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received October 22, 1928.

A Mexican palm up to 10 feet high, with pinnate leaves about 4 feet long. The undeveloped flowers are eaten as a vegetable.

For previous introduction see No. 68975.

77622 to 77624.

From Buitenzorg, Java. Seeds purchased from L. Koch, Chief, Plant Breeding Station. Received October 26, 1928.

77622. BRADBURYA PLUMIERI (Turp.) Kuntze (*Centrosema plumieri* Turp.). Fabaceae.

A tropical Brazilian ornamental vine with white and red flowers. Of value as a green manure.

For previous introduction see No. 72429.

77623. MIMOSA INVISA Mart. Mimosaceae.

77622 to 77624—Continued.

A bushy tropical Brazilian plant about 3 feet high, with feathery leaves and rose-colored flowers. It is used as a green manure.

For previous introduction see No. 69122.

77624. SHUTERIA VESTITA Wight and Arn. Fabaceae.

A slender leguminous vine, native to India, with trifoliolate leaves and copious racemes of small reddish flowers. It is used as a green manure.

For previous introduction see No. 68039.

77625 and 77626. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. **Nectarine.**

From Sawbridgeworth, England. Plants purchased from Thomas Rivers & Son. Received October 22, 1928.

77625. *Early Rivers.* A variety with large fruits ripening the end of July.

77626. *John Rivers.* A seedling from Peregrine and Duke of York peaches. The fruits have very juicy flesh and a good flavor.

77627. PSORALEA BITUMINOSA L. Fabaceae. **Scurf-pea.**

From Santa Cruz, Tenerife, Canary Islands. Seeds presented by Dr. César Peraza. Received October 29, 1928.

A herbaceous perennial, native to the Mediterranean region, with trifoliolate leaves and small bluish flowers in loose heads. Of value for green manure.

For previous introduction see No. 76765.

77628. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

From Brooks, Alberta, Canada. Seeds presented by Augustus Griffin, of the Canadian Pacific Railway, through Knowles A. Ryerson, Bureau of Plant Industry. Received October 10, 1928.

A pink-flowered selection from ordinary white clover, made at Brooks, Alberta, by Augustus Griffin, who reports that it is very vigorous and is said to be replacing ordinary white clover in New Zealand because of its vigor and hardiness.

77629 and 77630. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From the Philippine Islands. Cuttings presented by S. Youngberg, Director of the Bureau of Agriculture, Manila, at the request of F. G. Krauss, University of Hawaii, Honolulu. Received September 8, 1927. Numbered in November, 1928.

Material grown at the Lamao Experiment Station, Lamao, Bataan.

77629. *Los Banos.*

For previous introduction see No. 76198.

77630. *Orion.*

For previous introduction see No. 76197.

77631 to 77633. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Kuala Lumpur, Federated Malay States. Suckers presented by B. Bunting, agriculturist of the Malay Depart-

77631 to 77633—Continued.

ment of Agriculture, at the request of F. G. Krauss, University of Hawaii, Honolulu. Received January 7, 1928. Numbered in November, 1928.

77631. *Comte de Paris.*

77632. *Montserrat.*

77633. *Singapore canning.*

77634 to 77638. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Pasar Minggoe, East Indies. Offsets obtained by F. G. Krauss, University of Hawaii, Honolulu. Received October 12, 1927. Numbered in November, 1928.

77634. *Mandaloeng.*

77635. *Montserrat.*

77636. *Noenggal.*

77637. *Ripley Queen.*

77638. *Smooth Cayenne.*

77639. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Mayaguez, Porto Rico. Slips presented by T. B. McClelland, horticulturist of the Porto Rico Agricultural Experiment Station. Received April 3, 1928. Numbered in November, 1928.

Cabezona. The largest variety in the world, with the possible exception of the King of Borneo. The record fruit here weighing about 14½ kilos. It is used in high-grade canning in the old Lajas district.

77640 and 77641. NOTHOFAGUS spp. Fagaceae.

From Wellington, New Zealand. Seeds presented by G. Phillips Turner, Director of Forestry, State Forest Service. Received November 2, 1928.

77640. NOTHOFAGUS FUSCA (Hook. f.) Oerst.

Collected at the head of Lake Wakatipu, South Island. A New Zealand evergreen tree over 100 feet high, with zigzag branchlets, broadly ovate coarsely dentate leaves 1 to 2 inches long, and clusters of small nutlets resembling beechnuts.

For previous introduction see No. 75202.

77641. NOTHOFAGUS MENZIESII (Hook. f.) Oerst.

An evergreen tree, native to New Zealand, up to 80 feet high and 5 feet in diameter, with silvery white bark, coriaceous doubly crenate orbicular leaves half an inch long, and small fruits resembling beechnuts.

For previous introduction see No. 46644.

77642. ALSTONIA SCHOLARIS (L.) R. Br. Apocynaceae.

From Medan, Sumatra. Seeds presented by J. A. Lörzing. Received July 7, 1928. Numbered in November, 1928.

A tropical Indian tree, 40 to 90 feet high, with whorls of four to seven obovate evergreen leaves 8 inches long, and cymes of greenish white flowers. The bitter milky sap yields an inferior quality of guttapercha, and an extract of the bark is used like quinine.

77642—Continued.

For previous introduction see No. 65247.

77643. ACTINIDIA CHINENSIS Planch. Dilleniaceae. **Yangtao.**

From Seattle, Wash. Seeds presented by David Whitcomb. Received October 31, 1928.

An ornamental, deciduous climber native to Szechwan, China, which has attracted considerable attention because of the high quality of its fruits. The leaves have a plushlike texture and an unusual dark-green color, and their large size and regular spacing add to the beauty of the vine. The flowers are buff yellow to white, fragrant, often 1½ inches across, and are produced in great abundance. The ovoid to globose, russet-brown villous fruits are about 2 inches long. The flesh is green, resembling that of a gooseberry, but tempered with a flavor peculiarly its own. It can be used fresh or made into jam.

For previous introduction see No. 56608.

77644. THRINAX WENDLANDIANA Beccari. Phoenicaceae. **Palm.**

From Little River, Fla. Seeds presented by Charles T. Simpson. Received October 18, 1928.

A Cuban palm with a slender graceful trunk, palmate leaves which are reflexed against the trunk in age, and greenish-brown fruits the size of a pea.

77645. ACER NIKOENSE (Miquel) Maxim. Aceraceae. **Nikko maple.**

From Jamaica Plain, Mass. Seeds collected by Paul Russell, Bureau of Plant Industry, at the Arnold Arboretum. Received November 5, 1928.

A tree up to 50 feet high, native to Japan and central China, with attractive foliage which becomes brilliant red or purple in autumn.

77646. POPULUS ALBA NIVEA Ait. Salicaceae. **Poplar.**

From France. Plants obtained by Ivar Tidestrom, Bureau of Plant Industry. Received November 10, 1928.

A form of the white poplar with lobed leaves which are densely silvery-white tomentose beneath.

77647. AESCULUS WILSONII Rehder. Aesculaceae.

From Jamaica Plain, Mass. Plant presented by E. H. Wilson, Arnold Arboretum, through Paul Russell, Bureau of Plant Industry. Received November 12, 1928.

An ornamental tree, 75 feet high, native to Szechwan and Hupeh, China. It is closely allied to *Aesculus chinensis*, from which it differs only in a few minor characters. The leaves are downy when young, and the white flowers are borne in racemes which sometimes become 16 inches long. The burs are rough but not spiny.

For previous introduction see No. 56390.

77648. POPULUS TREMULA L. Salicaceae. **European aspen.**

77648—Continued.

From Versailles, France. Plants obtained by Ivar Tidestrom, Bureau of Plant Industry. Received November 12, 1928.

A European tree up to 90 feet high, with a round open head and thin, gray-green suborbicular crenate leaves, tomentose when unfolding, but soon glabrous. This is the true *Populus tremula*. Most of the plants called *P. tremula* in North America are not that species.

77649. CEREUS EMORYI Engelm. Cactaceae. **Cactus.**

From Mexico. Seeds collected by Peter D. Barnhart, Los Angeles, Calif. Received November 8, 1928.

A golden-spined cactus growing on the west coast of Lower California.

77650. CASTANEA PUMILA (L.) Mill. Fagaceae. **Chinquapin.**

From Savannah, Ga. Seeds purchased by B. T. Galloway, Bureau of Plant Industry. Received October 2, 1928.

A variety of unusual size, obtained in the market, said to be abundant in the vicinity of Savannah. The tree grows to a height of 30 to 40 feet, and should prove useful as a stock.

77651. LILIUM sp. Liliaceae. **Lily.**

From Chosen. Bulbs obtained by R. K. Beattie, Bureau of Plant Industry. Received October 1, 1928.

No. 702. Collected by Rikimatsu Takagi at the Koryo Forest Experiment Station, about 25 miles northeast of Heijo.

77652 and 77653. PRUNUS spp. Amygdalaceae.

From Yokohama, Japan. Seeds purchased from Herbst Bros., agents, T. Sakata & Co. Received October 9, 1928.

77652. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Mak. (*P. sargentii* Rehder). **Sargent cherry.**

Seeds said to be from the northern, more hardy form of the yamazakura (mountain cherry).

77653. PRUNUS SUBHIRTELLA Miquel. **Higan cherry.**

Seeds said to be from the pendulous variety of this species. Usually only a small percentage of such seedlings will show the pendulous habit.

77654 to 77656.

From Jerusalem, Palestine. Presented by Col. E. R. Sawer, Director, Department of Agriculture, Forests, and Fisheries. Received October 5, 1928.

77654. IRIS BISMARCKIANA Regel. Iridaceae.

Roots of a herbaceous perennial native to Palestine. The stem is 18 inches high, the lanceolate leaves 8 inches long, and the single large flower has orbicular standards veined sky blue on a creamy ground and orbicular yellowish falls densely spotted with purple brown.

77655. IRIS SISYRINCHIUM L. Iridaceae.

Bulblets of a perennial, a foot high, native to southern Europe. It has two linear leaves and several flowers with

77654 to 77656—Continued.

erect lanceolate pale-lilac standards and spatulate lilac falls with a yellow oblong spot.

77656. ORNITHOGALUM sp. Liliaceae.

Seeds of a form native to the vicinity of Jerusalem. Ornithogalums are bulbous perennials with narrow leaves and scapes bearing racemes of white, yellowish, or reddish flowers.

77657 to 77659. FICUS spp. Moraceae.

From Manila, Philippine Islands. Seeds presented by Arthur Fischer, Director, Bureau of Forestry. Received October 1, 1928.

77657. FICUS CALOPHYLLOIDES Elmer.

A large spreading tree, 70 feet high and 4 feet in diameter, native to the Philippines, with elliptic leaves 5 inches long and flattened globose yellowish-brown fruits.

77658. FICUS CONORA King.

A tree, native to New Guinea, with softly pubescent branchlets, lanceolate entire leaves 7 inches long, pubescent beneath, and turbinate fruits an inch in diameter, borne on long flexuose leafless branches arising at the base of the trunk.

77659. FICUS RIBES Reinw.

A small Malayan tree with alternate glabrous entire oblanceolate leaves 3 to 5 inches long, and small fruits, less than a quarter of an inch in diameter, borne on slender leafless branches at the base of the trunk.

For previous introduction see No. 50397.

77660. DANTHONIA PILOSA R. Br. Poaceae. **Grass.**

From Wellington, New Zealand. Seeds presented by Wright, Stephenson & Co. Received October 5, 1928.

A perennial Australian grass said to be excellent for pasture. It seeds freely and gives good fodder in early spring. This grass does well on dry clay hills or stony flats and is considered especially good for sheep.

For previous introduction see No. 76012.

77661 to 77690.

From Orleans, France. Plants purchased from Léon Chenault & Son. Received October 31, 1928.

77661. CARYOPTERIS MONGHOLICA Bunge. Verbenaceae.

A Mongolian shrub with nearly entire linear-lanceolate leaves 1 to 2 inches long and axillary cymes of violet-blue flowers in late summer. It resembles *C. incana*, but is of rather coarser habit.

For previous introduction see No. 76053.

77662. CARYOPTERIS TANGUTICA Maxim. Verbenaceae.

A spreading, deciduous shrub 3 to 5 feet high, rather similar to the preceding, native to northwestern China, with drooping branches, coarsely crenate ovate leaves an inch long, gray tomentose beneath, and axillary cymes of deeply 2-lipped small brilliant-blue flowers.

77661 to 77690—Continued.

For previous introduction see No. 62703.

77663 to 77667. CEANOTHUS spp. Rhamnaceae.

Half shrubby garden hybrids of various species of Ceanothus which are ornamental shrubs, flowering in late summer and autumn.

77663. CEANOTHUS sp.

Arnouldi. Flowers pale blue.

77664. CEANOTHUS sp.

Azureus Grandiflorus. Large azure-blue panicles.

77665. CEANOTHUS sp.

Jocelyn. Elegant dwarf panicles of bright-pink flowers.

77666. CEANOTHUS sp.

Lucie Simon. Flowers clear blue.

77667. CEANOTHUS sp.

Palmyre. A dwarf plant with globulous panicles of violaceous pink flowers.

77668 to 77672. CHAENOMELES LAGENARIA (Lois.) Koidz. (*Cydonia japonica* Pers.). Malaceae. **Japan quince.**

Ornamental shrubs with flowers varying from deep scarlet to white and opening early in the spring before the leaves.

77668. *Apricot.* A dwarf shrub with beautiful salmon-red flowers.

77669. *Grenade.* Large globular dark-crimson flowers.

77670. *Nivalis.* Flowers large and the whitest among the flowering quinces.

77671. *Orange.* Large, clear, orange-red flowers.

77672. *Vermilion.* Very large scarlet-vermilion flowers.

77673. DEUTZIA MYRIANTHA Lemoine. Hydrangeaceae.

A deciduous ornamental shrub of garden origin with ovate-lanceolate, long-pointed leaves and corymbs of white flowers nearly an inch across.

77674. DEUTZIA WILSONI Duthie. Hydrangeaceae.

A deciduous shrub, native to central China, with chestnut-brown branchlets, elliptic leaves stellate pubescent beneath, and loose broad corymbs of white flowers each nearly an inch in diameter.

For previous introduction see No. 76186.

77675. DIPELTA FLORIBUNDA Maxim. Caprifoliaceae.

A deciduous ornamental shrub somewhat resembling Kolkwitzia, but larger in all its parts, 15 to 20 feet high, native to central China, with remotely toothed ovate leaves 2 to 4 inches long, and small racemes of fragrant pale-rose tubular flowers having orange-yellow throats.

77676. DIPTERONIA SINENSIS Oliver. Aceraceae.

A Chinese tree 30 to 40 feet high, with compound leaves made up of 9 to 13 ovate-serrate or 3-foliolate leaflets 4 inches long, whitish flowers in panicles, followed by light-brown nearly orbicular winged fruits.

77661 to 77690—Continued.

For previous introduction see No. 61979.

77677. EXOCHORDA GIRALDII Hesse. Rosaceae. **Redbud pearlbush.**

A slender spreading deciduous shrub 10 to 15 feet high, native to northwestern China. The petiole and ribs of the entire or slightly serrate oblong leaves are rosy purple as well as the young growths, and the large pure white flowers in terminal racemes appear in late spring.

77678. EXOCHORDA GIRALDII WILSONII Rehder. Rosaceae. **Wilson pearlbush.**

A central Chinese form of *Exochorda giraldii* with a more upright and vigorous habit and more flowers than the type. It is a slender spreading deciduous shrub about 10 feet high, with oblong-elliptic, occasionally serrate leaves, and racemes of 6 to 10 pure-white flowers which are 2 inches across appearing in late spring.

For previous introduction see No. 65769.

77679 to 77683. HAMAMELIS spp. Hamamelidaceae. **Witch-hazel.**

77679. HAMAMELIS JAPONICA ARBOREA (Masters) Rehder.

A small deciduous Japanese tree up to 30 feet high, with nearly orbicular leaves 4 inches long and flowers having a deep vinous red reflexed calyx and golden-yellow petals. The flowers appear in winter, and the delicate petals are not injured by zero weather

77680. HAMAMELIS JAPONICA ZUCCARINIANA (Ottolander) Gumbleton.

A form of the Japanese witch-hazel with more upright branches than the type, and calyx lobes greenish yellow inside and pale-yellow petals.

77681. HAMAMELIS MOLLIS Oliver. **Chinese witch-hazel.**

A deciduous shrub or small tree, native to central China, with densely tomentose branchlets, broadly ovate leaves 4 to 7 inches long, and flowers opening in winter having sepals rusty tomentose outside and purple inside while the petals are golden yellow with a reddish base. It is said to be the handsomest of the witch-hazels.

For previous introduction see No. 72873.

77682. HAMAMELIS RUBRA Hort.

A horticultural form described as having red-orange flowers.

77683. HAMAMELIS VERNALIS Sargent.

An upright deciduous shrub 6 to 8 feet high, native to Oklahoma, with obovate leaves 5 inches long and fragrant reddish flowers appearing in the spring. Secured for comparative study only.

77684. HYMENANTHERA CRASSIFOLIA Hook. f. Violaceae.

A dense half-evergreen New Zealand shrub about 6 feet high, with rigid branches, crowded obovate leaves an inch long, small yellow axillary flowers followed by globose white berries a quarter of an inch in diameter.

77661 to 77690—Continued.

77685 to 77687. INDIGOFERA spp. Fabaceae.

77685. INDIGOFERA DECORA ALBA Sargent.

A white-flowered form of *Indigofera decora*, which is a Chinese shrub about 2 feet high, with reddish-brown branchlets, 7 to 13 elliptic leaflets, and racemes of flowers 8 to 10 inches long.

77686. INDIGOFERA HEBEPETALA Benth.

A deciduous shrub, about 3 feet high, with 5 to 11 broadly ovate leaflets 3 inches long, and dense racemes nearly a foot long of pea-shaped flowers having crimson standards and rose-colored wings and keels.

77687. INDIGOFERA POTANINII Craib.

A deciduous upright shrub, native to northwestern China, with five to nine oblong leaflets an inch long and racemes of small bright-rose flowers.

77688. OSMANTHUS ARMATUS Diels. Oleaceae.

An evergreen Chinese shrub up to 15 feet high, with opposite oblong spiny toothed leaves 4 to 6 inches long, axillary or terminal panicles of small fragrant white flowers and ovoid fruits.

77689. OSMANTHUS SERRULATUS Rehder. Oleaceae.

An evergreen Chinese shrub or small tree up to 35 feet high, with coriaceous obovate spiny serrulate leaves 3 to 5 inches long, panicles of fragrant white flowers, and black fruits. It is closely related to *Osmanthus fragrans*.

77690. RHODODENDRON MACROSTEMON Maxim. Ericaceae.

A low half-evergreen Japanese shrub with pubescent elliptic-oblong leaves half an inch long and salmon-red flowers an inch across having stamens twice as long as the corolla. It is closely related to *Rhododendron obtusum*.

77691. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Honolulu, Hawaii. Seeds presented by J. M. Westgate, director, Hawaii Agricultural Experiment Station. Received November 5, 1928.

Solo. From the standpoint of the home gardener this is considered one of the best of the papayas. Although small, its qualities of texture and flavor give it first rank.

For previous introduction see No. 76495.

77692. VICIA PICTA Fisch. and Mey. Fabaceae. **Vetch.**

From Kharkof, Russia. Seeds presented by Prof. D. C. Vilensky, Ukraine Institute of Applied Botany. Received November 5, 1928.

A biennial vetch, native to Armenia, of value there as a cover crop.

77693 to 77698.

From Amani, Tanganyika Territory, Africa. Seeds presented by the superintendent of plantations, East African Agricultural Research Station. Received October 12, 1928.

77693 to 77698—Continued.

77693. ERYTHRINA TOMENTOSA R. Br. Fabaceae.

A tree native to South Africa, up to 20 feet high, with thick, rough, prickly bark. The long-stemmed, trifoliolate leaves, 10 to 14 inches long and wide, are densely hairy on both surfaces, and the bright-crimson flowers are borne in many-flowered spikelike clusters. The woody pods, velvety on the surface, are alternately swollen and contracted, which gives them a bizarre appearance.

For previous introduction see No. 56187.

77694. ERYTHRINA VELUTINA Willd. Fabaceae.

A spiny tree, native to Venezuela, up to 30 feet high, which, while leafless, bears large masses of rosy red flowers. The leaves are compound with three cordate triangular entire leaflets.

77695. GREWIA CALYMMATOSEPALA Schum. Tiliaceae.

A woody climber, native to tropical Africa, which reaches to the tops of the tallest trees. It has oblong to elliptic leaves 3 to 8 inches long and short racemes of small pinkish-white flowers.

77696. HIBISCUS SCOTTI Balf. f. Malvaceae.

A large shrub or small tree, native to the island of Socotra, with ovate leaves either entire, toothed, or lobed and flowers, 3 to 4 inches across, bright yellow with a carmine eye.

77697. LANDOLPHIA sp. Apocynaceae.

Landolphias are woody vines with opposite leaves and are a possible source of rubber.

77698. MASCARENHASIA ELASTICA Schum. Apocynaceae.

A tree, native to tropical Africa, with oblong coriaceous leaves 10 inches long, axillary and terminal cymes of pink or purple flowers, and smooth purplish-black fruits 3 to 4 inches long. This tree is a source of rubber, and the timber is also said to be excellent.

For previous introduction see No. 61498.

77699. NEOGLAZIOVIA VARIEGATA (Arruda). Mez (*Billbergia variegata* Schult.) Bromeliaceae. **Caroa.**

From Vicosa, Minas Geraes, Brazil. Plants presented by P. H. Rolfs, Escola Superior de Agricultura e Veterinaria, through L. H. Dewey, Bureau of Plant Industry. Received October 7, 1927. Numbered in December, 1928.

The caroa is a plant 4 or 5 feet high, of the same family as the pineapple, and is found wild in the caatingas, or dry regions, of eastern Brazil. The natives extract the fiber for the purpose of making baskets, ropes, and hammocks, but the amount obtained is not sufficient for export.

For previous introduction see No. 63868.

77700. PRUNUS YEDOENSIS Mats. Amygdalaceae. **Yoshino cherry.**

Trees growing at the United States Plant Introduction Garden, Chico, Calif., originally from Highland Park, Rochester, N. Y. Numbered in October, 1928.

77700—Continued.

P. I. G. No. 16826. Tree 3, rows 146 to 148, old test orchard. *Taizanfukun* (mountain snowcap). Trees erect, about 15 feet high, with dark-brown bark; flowers semidouble to double, pink, about an inch in diameter, often borne near the ends of the branches. Pedicels and calyxes more or less hairy.

For previous introduction see No. 76080.

77701 to 77707.

From Jamaica Plain, Mass. Seeds and scions collected at the Arnold Arboretum by Paul Russell, Bureau of Plant Industry. Received November, 1928.

77701 and 77702. DIPELTA FLORIBUNDA Maxim. Caprifoliaceae.

For previous introduction and description see No. 77675.

77701. Seeds.

77702. Arboretum No. 15414. Scions.

77703. LIGUSTRUM ACUTISSIMUM Koehne. Oleaceae. **Privet.**

Arboretum No. 14973–1. Seeds of a loose-growing much-branched shrub 10 feet or less high, with spreading and curving branches and very narrow sharp-pointed leaves about 2 inches long. The white flowers are borne in dense nodding panicles about an inch long. This privet is native to Japan and China.

For previous introduction see No. 72874.

77704. MALUS THEIFERA Rehder. Malaceae. **Tea crab.**

Arboretum No. 7241. Seeds of a spreading tree about 25 feet high, with smooth dark-gray bark. The fragrant white or pinkish flowers, about 2 inches across, are in clusters of three to seven, and the fruits, about half an inch in diameter, are greenish yellow with red cheeks. A floriferous and handsome crab apple.

For previous introduction see No. 61983.

77705 and 77706. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

77705. Arboretum No. 20135. *Masuyama.* Scions of a small spreading tree with reddish brown bark. The young leaves, which appear before the flowers fall, are brownish green. The flowers, deep pink in the bud, are semidouble, light pink with deeper pink toward the margins, and open rather flat. Compared with Horinji, a closely related variety, the flowers are slightly less double and are flatter when fully opened.

For previous introduction see No. 77264.

77706. Arboretum No. 7608–C. *Miyako* (beauty or prosperity). Scions of a tree of upright habit; bark dark brown; young foliage light brown; buds deep pink, truncate; flowers semidouble, opening rather flat, up to about 2 inches in diameter, almost white in center, becoming pink toward the fimbriate petal tips and on back, in drooping clusters. A very attractive variety.

For previous introduction see No. 77265.

77701 to 77707—Continued.

77707. PRUNUS SUBHIRTELLA Miquel. Amygdalaceae. **Higan cherry.**

Arboretum No. 3674. Scions of the so-called typical form of the Higan cherry, which is not known in the wild state. It is a rather low, wide-spreading tree with smooth gray bark. In early spring, before the leaves appear, the tree is hidden in a dense mass of very light pink flowers, slightly larger than those of the other Higan cherries. The small black fruits follow early in the summer.

77708. ANNONA SPINESCENS Mart. Annonaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received November 9, 1928.

A spiny Brazilian shrub up to 15 feet high, with small leathery leaves and orange-red, heart-shaped fruits 3 inches long which are edible but insipid. The Philippine name is alagadisso.

For previous introduction see No. 37911.

77709. CHIONANTHUS RETUSA Lindl. Oleaceae. **Chinese fringetree.**

From Rochester, N. Y. Cuttings collected at Highland Park by Paul Russell, Bureau of Plant Industry. Received November 14, 1928.

A beautiful deciduous, hardy, ornamental tree bearing, during the spring, a multitude of white, deliciously fragrant flowers, with very narrow petals, followed in the autumn by masses of blue berries resembling wild grapes. This variety is considered by some to be superior to the Virginia fringetree (*Chionanthus virginica*) because of the whiteness and fragrance of its flowers and its more graceful habit.

For previous introduction see No. 65766.

77710 to 77816. SACCHARUM spp. Poaceae.

From New Guinea. Cuttings collected by E. W. Brandes, Bureau of Plant Industry. Received October and November, 1928.

77710 to 77781. SACCHARUM OFFICINARUM L. **Sugarcane.**

77710. No. 14. *Geni kom.*

77711. No. 15. *Geni kom.*

77712. No. 16. *Badoa kom.*

77713. No. 17. *Memeki kom.*

77714. No. 18. *Laguani keboli.*

77715. No. 19. *Doraki kom.*

77716. No. 20. *Koloa kom.*

77717. No. 27. *Lepesi kom.*

77718. No. 28. *Kemari kom.*

77719. No. 29. *Goru kom.*

77720. No. 30. *Voluma kom.*

77721. No. 31. *Gojaji.*

77722. No. 32. *Paluma.*

77723. No. 33. *Karuma.*

77724. No. 34. *Kaki hagi.*

77725. No. 35. *Magi.*

77726. No. 36. *Mumudi.*

77727. No. 37. *Jovi-uru.*

77710 to 77816—Continued.

77728. No. 39. *Udebis.*

77729. No. 40. *Mihaki.*

77730. No. 41. *Towato.*

77731. No. 42. *Hugija.*

77732. No. 43. *Mehaki guwak.*

77733. No. 46. *Kasimo.*

77734. No. 47. *Buna wai.*

77735. No. 48. *Goiva.*

77736. No. 49. *Jahuni.*

77737. No. 50. *Hinogoru.*

77738. No. 51. *Mahi (Mah-i).*

77739. No. 52. *Serepi.*

77740. No. 53. *Jarowa.*

77741. No. 54. *Kasosoi.*

77742. No. 56. *Badoaveo.*

77743. No. 57. *Jare.*

77744. No. 58. *Ubo em.*

77745. No. 59. *Auna e belle.*

77746. No. 61. *Sisiara.*

77747. No. 62. *Suava bita.*

77748. No. 63. *Gogi.*

77749. No. 64. *Buna wai.*

77750. No. 65. *Boraru.*

77751. No. 66. *Badowai.*

77752. No. 67. *Badowai.*

77753. No. 68. *Naita.*

77754. No. 69. *Gogi.*

77755. No. 70. *Buna wai.* A striped cane.

77756. No. 71. *Ai bai kina.*

77757. No. 73. *Serebe.* A striped cane.

77758. No. 74. *Gurutu.*

77759. No. 76. *Erenai.*

77760. No. 78. *Kiena.*

77761. No. 79. *Baroko.*

77762. No. 80. *Gurutu.*

77763. No. 81. *Apia baina.*

77764. No. 82. *Gauka.*

77765. No. 83. *Giema arepa.*

77766. No. 84. *Bogara umoi.*

77767. No. 85. *Jaroko.*

77768. No. 86. *Moberr.*

77769. No. 87. *Magi.*

77770. No. 88. *Joda.*

77771. No. 90. *Kani meta.*

77772. No. 91.

77773. No. 92 (2). *Wai no.*

77774. No. 93. *Siriwo.*

77775. No. 94. *Adema.*

77776. No. 95. *Ruba ruba.*

77777. No. 96. *Ara gojehi.*

77778. No. 97. *Dai dobi.*

77779. No. 98. *Geni kom.*

77710 to 77816—Continued.

77780. No. 99. *Wai no.*

77781. No. 100.

77782. SACCHARUM SPONTANEUM L. **Grass.**

No. 101. A grass closely related to sugarcane.

77783. SACCHARUM sp. **Grass.**

No. 102. Probably a hybrid between *Saccharum spontaneum* and *S. robustum.*

77784. SACCHARUM sp. **Grass.**

No. 103. A new species of sugarcane.

77785. SACCHARUM sp. **Grass.**

No. 104. A new species of sugarcane.

77786. SACCHARUM sp. **Grass.**

No. 105. A new species of sugarcane.

77787 to 77816. SACCHARUM OFFICINARUM L. **Sugarcane.**

77787. No. 106. *Kinikomu.*

77788. No. 107. *Kamli kom.*

77789. No. 108. *Gao.*

77790. No. 109. *Ra u rai.*

77791. No. 110. *Parua.*

77792. No. 201.

77793. No. 202.

77794. No. 203.

77795. No. 206.

77796. No. 207.

77797. No. 208.

77798. No. 209.

77799. No. 210.

77800. No. 211.

77801. No. 212.

77802. No. 213.

77803. No. 214.

77804. No. 215.

77805. No. 216.

77806. No. 217.

77807. No. 218.

77808. No. 220.

77809. No. 221.

77810. No. 222.

77811. *A.*

77812. *B.*

77813. *D.*

77814. *E.*

77815. *F.*

77816. *G.*

77817. VIBURNUM SARGENTI FLAVUM Rehder. Caprifoliaceae.

From Rochester, N. Y. Cuttings collected by Paul Russell, Bureau of Plant Industry, at Highland Park. Received November 14, 1928.

A hardy ornamental shrub about 10 feet high, with gray bark, broadly oval coarsely dentate 3-lobed leaves, and numerous clusters of attractive yellow fruits in early autumn. A garden variety. The typical form is native to northeastern Asia.

77818. (Undetermined.)

From China. Seeds collected by J. F. Rock, National Geographic Society, Washington, D. C. Received November 19, 1928.

No. 16736. From the Litang River Valley, above Wachin monastery, Muli Territory, southwestern Szechwan, July, 1928. A curious lilylike plant 5 feet or more tall, bearing between 50 and 100 fragrant flowers about 1½ inches long and of a most delicate mauve lavender. It grows in forest clearings at an altitude of 13,000 feet. Unlike true lilies, it has not 1 bulb but bears from 10 to 15 bulblets at the ends of the short roots.

77819 to 77870.

From Jamaica Plain, Mass., and Rochester, N. Y. Collected by Paul Russell, Bureau of Plant Industry. Received in November, 1928.

Seeds have been received unless otherwise stated.

77819 to 77855. From the Arnold Arboretum, Jamaica Plain, Mass. The numbers at the beginning of some of the descriptions refer to those of the Arnold Arboretum.

77819. ACANTHOPANAX LEUCORRHIZUM (Oliver) Harms. Araliaceae.

No. 10655. An ornamental shrub up to 12 feet high with prickly branches, digitately compound sharply serrate leaves, and small round black berries in numerous large pendulous umbels. Native to central and western China.

For previous introduction see No. 40710.

77820 to 77822. ACER spp. Aceraceae. **Maple.**

77820. ACER ARGUTUM Maxim.

No. 1796–2. A small, deciduous tree with erect branches and doubly serrate leaves 2 to 4 inches long. The greenish yellow flowers are produced during April before the leaves, and the keys are borne in hanging racemes. This tree is a native of the mountain woods of Japan and makes an elegant appearance with its pale-green leaves during the summer and its purplish-brown branches in the winter.

For previous introduction see No. 43676.

77821. ACER GRISEUM (Franch.) Pax. **Paperbark maple.**

A handsome western Chinese maple which becomes 30 feet high under favorable conditions. The leaves are trifoliolate. The striking feature of this maple is the cinnamon-brown papery bark which flakes off like that of the river birch.

For previous introduction see No. 38992.

77822. ACER TSCHONOSKII Maxim.

No. 12577. A graceful shrubby tree 20 feet or less high, native to Japan. The leaves turn to bright yellow in the autumn.

77823. CALLICARPA GIRALDIANA Hesse. Verbenaceae.

No. 6712. A deciduous Chinese shrub 10 feet high, with membranous light-green leaves, cymes of pink flowers, and dense clusters of round berrylike violet fruits, which hang on after the leaves have fallen.

77819 to 77870—Continued.

For previous introduction see No. 76183.

77824. CARPINUS CORDATA Blume. Betulaceae. **Hornbeam.**

No. 12971. A handsome hardy tree 40 feet or less high, with oval-oblong, acuminate leaves 3 to 6 inches long. Native to Japan and Manchuria.

For previous introduction see No. 71141.

77825. CEPHALOTAXUS DRUPACEA SINENSIS Rehd. and Wils. Taxaceae.

An ornamental evergreen yewlike shrub up to 12 feet high, with stiff spreading branches and sharp-pointed linear leaves about an inch long.

For previous introduction see No. 40018.

77826. CORNUS KOUSA CHINENSIS Osborn. Cornaceae.

No. 13123. A Chinese dogwood which becomes about 25 feet high, with dark-green leaves nearly 5 inches long and showy white flowers which appear in June after the leaves. The fruiting heads are globose, pinkish, and about an inch across.

77827. COTONEASTER APICULATA Rehd. and Wils. Malaceae.

No. 7275–B. A low wide-spreading shrub with closely overlapping branches forming a mound 2 or 3 feet high. The small oval dark-green leaves, which persist until winter, form an excellent background for the bright-scarlet berries in autumn. Native to western China.

For previous introduction see No. 76231.

77828. DECAISNEA FARGESII Franch. Lardizabalaceae.

A handsome shrub up to 15 feet high with large pinnate leaves 3 feet long, greenish flowers in long pendulous racemes, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see No. 62922.

77829. EUONYMUS MAACKII Rupr. Celastraceae.

A large shrub or small tree with narrowly oval leaves about 3 inches long and small clusters of pink, 4-lobed fruits which have orange-red arils. Native to northeastern Asia.

For previous introduction see No. 66567.

77830. FRAXINUS BUNGEANA DC. Oleaceae. **Ash.**

No. 14626–B. A hardy shrubby Chinese ash 15 feet or less high, said to grow well in dry rocky ground.

77831. HAMAMELIS MOLLIS Oliver. Hamamelidaceae. **Chinese witchhazel.**

For previous introduction and description see No. 77681.

77819 to 77870—Continued.

77832. ILEX SERRATA Thunb. Aquifoliaceae. **Holly.**

No. 892–3. A slender ornamental deciduous shrub native to Japan, about 15 feet high, with oval, finely serrate leaves and small bright-red berries.

For previous introduction see No. 75716.

77833. LESPEDEZA CYRTOBOTRYA Miquel. Fabaceae.

No. 6000. A small deciduous bush-clover, native to Japan and Chosen, which bears racemes of rosy purple, pea-shaped flowers during midsummer.

For previous introduction see No. 76057.

77834. LONICERA VILMORINII Rehder. Caprifoliaceae. **Honeysuckle.**

No. 4801. An ornamental shrub up to 10 feet high, with arching branches, oblong leaves, and yellowish pink fruits. It is a hybrid between *Lonicera quinquelocularis* and *L. deflexicalyx*.

77835 to 77837. MAACKIA spp. Fabaceae.

77835. MAACKIA AMURENSIS Rupr.

A small tree, native to eastern Asia, with orange-brown bark, dull-green compound leaves, and short erect clusters of small yellowish-white flowers.

For previous introduction see No. 65939.

77836. MAACKIA AMURENSIS BUERGERI C. Schneid.

A variety, native to Japan, with pubescent leaflets.

77837. MAACKIA CHINENSIS Takeda.

No. 6962. A large leguminous tree up to 75 feet high, native to central China. The compound leaves consist of 11 to 13 oval leaflets 1 to 3 inches long. The white flowers, about half an inch long, are borne in racemes up to 8 inches long.

77838. MALUS KANSUENSIS (Batal.) C. Schneid. Malaceae.

No. 10096–B. A small tree, up to 25 feet high, native to northwestern China. The small flowers are white and the ellipsoid fruits, about half an inch long, are yellow or reddish.

For previous introduction see No. 72810.

77839 and 77840. MALUS TORINGOIDES (Rehder) Hughes (*M. transitoria toringoides* Rehder). Malaceae.

A shrub or small tree, up to 25 feet high, with oval 4-lobed leaves, and handsome fruits about half an inch long, yellow, usually with a red cheek. Native to western China.

For previous introduction see No. 54092.

77839. No. 7186. Seeds.

77840. No. 17475. Scions.

77841. MORUS ACIDOSA Griffith. Moraceae. **Acid mulberry.**

A usually broad shrub 3 to 16 feet high, but occasionally a tree 25 feet high, found in Hupeh and Szechwan Provinces, China. The leaves are very variable in size and shape and are not used for feeding silkworms. The edible fruits, dark red or shining black, are very palatable.

For previous introduction see No. 66299.

77842. PHELLODENDRON JAPONICUM Maxim. Rutaceae. **Corktree.**

A tree native to Japan, up to 30 feet high, with dark-brown bark, compound leaves composed of 9 to 13 ovate, dull-green leaflets, and black fruits in panicles 2 to 3 inches across.

For previous introduction see No. 66936.

77843. PSEUDOLARIX AMABILIS (Nelson) Rehder (*P. kaempferi* Gordon). Pinaceae. **Goldenlarch.**

No. 3656. A deciduous tree, native to China, sometimes as much as 130 feet high, with long spreading branches pendulous at the extremities. The light-green leathery foliage turns a clear yellow in the autumn.

For previous introduction see No. 71981.

77844. SORBUS ALNIFOLIA (Sieb. and Zucc.) Koch. Malaceae. **Mountain-ash.**

An upright tree, 60 feet high, with a dense round head, attractive bright-green foliage, and clusters of small red and yellow fruits. Native to eastern Asia.

For previous introduction see No. 65693.

77845. SORBUS COMMIXTA Hedl. Malaceae. **Japanese mountain-ash.**

No. 2077–1. A shrub or tree, native to central and northern Japan, with bright-green serrate variable leaves usually composed of five or six pairs of glabrous leaflets. The white flowers are in terminal corymbs, and the bright-red, nearly globular fruits are about one-fourth of an inch in diameter.

For previous introduction see No. 43728.

77846 to 77848. SYRINGA spp. Oleaceae. **Lilac.**

77846. SYRINGA KOMAROWI C. Schneid.

A Chinese shrub up to 15 feet high, with ovate leaves 5 to 7 inches long and nodding crowded panicles of purple-pink flowers.

For previous introduction see No. 76599.

77847. SYRINGA MEYERI C. Schneid. **Meyer lilac.**

A compact shrub up to 10 feet high, native to northern China, with small oval-elliptic leaves and dense panicles of violet flowers, which appear very early in the season.

77848. SYRINGA PINETORUM W. W. Smith.

No. 19140. A spreading shrub about 10 feet high, from southwestern China. The purplish flowers are borne in panicles about 5 inches long.

77819 to 77870—Continued.

77849. TRIPTERYGIUM REGELII Sprague and Takeda. Celastraceae.

A shrub about 5 feet high, with reddish brown warty branches, light-green broadly oval leaves, and terminal panicles of small fragrant greenish-yellow flowers.

77850 to 77852. VIBURNUM spp. Caprifoliaceae.

77850. VIBURNUM HUPEHENSE Rehder.

No. 18020. A deciduous shrub, native to China, about 6 feet high, with broadly ovate, densely pubescent, dentate leaves 2 to 3 inches long, cymes of small white flowers, and clusters of ovoid red fruits.

For previous introduction see No. 76602.

77851. VIBURNUM THEIFERUM Rehder.

An upright deciduous shrub, about 12 feet high, with dark-green, oval-oblong leaves about 4 inches long and ovoid bright-red fruits. Native to central China.

For previous introduction see No. 67064.

77852. VIBURNUM WRIGHTII Miquel.

A handsome deciduous shrub, native to Japan, about 10 feet high, with broadly oval or nearly round leaves and showy red fruits. The leaves turn crimson in early autumn.

For previous introduction see No. 43736.

77853. CYDONIA OBLONGA Mill. (*Pyrus cydonia* L.). Malaceae. **Quince.**

Scions of a large-fruited variety.

77854. MALUS THEIFERA Rehder. Malaceae. **Tea crab.**

No. 17474. Scions.

For previous introduction and description see No. 77704.

77855. PRUNUS INCISA Thunb. Amygdalaceae.

Variety *Zansetsu*. Scions of an ornamental cherry, native to Japan, which is a large shrub, or sometimes a small tree, about 25 feet high. The flowers, which appear in drooping clusters before the deeply cut leaves, are white or rosy, with bright-red calyxes, and the anthers are bright yellow. The petals fall early, but the calyxes, which gradually grow brighter, remain on the young fruits for some time and are quite showy.

For previous introduction see No. 64669.

77856 to 77870. From Highland Park, Rochester, N. Y.

77856. ACANTHOPANAX DIVARICATUM (Sieb. and Zucc.) Seem. Araliaceae.

A large deciduous spreading shrub of vigorous habit, up to 10 feet high, with handsome dark-green leaves and spherical heads of inky black fruits. It is native to Japan and is very closely related to *Acanthopanax sessiliflorum*. Unlike the latter, this species has downy young shoots, and the lower surfaces of the leaves are also quite downy. It should probably prove hardy in all but the coldest parts of the United States.

For previous introduction see No. 75663.

77857. ACANTHOPANAX LASIOGYNE Harms. Araliaceae.

A prickly stemmed shrub up to 20 feet high, with light-gray branchlets, attractive compound leaves composed of three oblong leaflets, and umbels of small black berries. Native to western China.

77858. CATALPA OVATA Don. Bignoniaceae. **Japanese catalpa.**

An ornamental tree, native to Japan, up to 20 feet high, with large, broadly heart-shaped leaves often 3-lobed to 5-lobed, and fragrant yellow flowers, striped with orange and violet within, in many-flowered panicles 4 to 7 inches long.

For previous introduction see No. 62266.

77859. COTONEASTER IGNAVA E. L. Wolf. Malaceae.

A hardy ornamental shrub about 5 feet high, native to eastern Turkestan. The oval-orbicular leaves are about an inch long, and the dark-purple fruits are in rather dense pendulous clusters.

77860. CRATAEGUS CHLOROSARCA Maxim. Malaceae.

A small hardy pyramidal tree with dark-green triangular-oval leaves and black subglobose fruits about two-fifths of an inch in diameter. Native to Manchuria.

77861. EVODIA HUPEHENSIS Dode. Rutaceae.

A very common tree in the woodlands of western Hupeh, China, where it grows to a height of 20 to 40 feet. It has smooth, gray bark, spreading branches, and white flowers in large flat corymbs.

For previous introduction see No. 63357.

77862 to 77864. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

77862. LONICERA ORIENTALIS LONGIFOLIA Dipp. (*L. kesselringi* Regel.).

A large deciduous shrub about 10 feet high, with oblong or lanceolate leaves up to 2½ inches long, small reddish flowers, and black fruits. Native to Kamchatka, Siberia.

For previous introduction see No. 41946.

77863. LONICERA QUINQUELOCULARIS Hardwicke.

An erect shrub, up to 15 feet high, with spreading branches, downy purplish young twigs, and dull-green broadly oval leaves. The flowers are creamy white, changing to yellow and the berries are translucent white.

For previous introduction see No. 40187.

77819 to 77870—Continued.

77864. LONICERA WEBBIANA Wall.

A stout shrub about 10 feet high, native to southeastern Europe and Afghanistan. The yellowish flowers, tinged with red, are followed by scarlet fruits.

77865. SORBUS MATSUMURANA Koehne. Malaceae.

An ornamental shrub or small tree, native to Japan, with compound leaves composed of 9 to 13 oblong dark-green leaflets and loose clusters of globular red fruits.

77866. STEWARTIA PSEUDO-CAMELLIA Maxim. Theaceae.

A handsome tree, native to Japan, up to 50 feet high, with erect branches and red bark. The thickish obovate-lanceolate leaves are bright green, and the large white flowers which resemble single camellias are borne in summer.

For previous introduction see No. 75693.

77867. TILIA MIQUELIANA Maxim. Tiliaceae.

A tree up to 40 feet high, cultivated as a shade tree in Japan. The oval-triangular, obliquely cordate, dark-green leaves are 2 to 5 inches long.

77868. TILIA OLIVERI Szyszyl. Tiliaceae.

A trees 50 feet high, with dark-green orbicular ovate leaves, white tomentose beneath, and small globose fruits. The pendulous cymes contain 7 to 20 small white flowers. Native to central China.

77869. ZANTHOXYLUM BUNGEI Planch. Rutaceae.

An ornamental deciduous shrub or small tree up to 20 feet high, armed with stout prickles about half an inch long. The shining green compound leaves consist of 7 to 11 oblong leaflets, and the small fruits are reddish. Native to northern and central China.

77870. ZANTHOXYLUM SCHINIFOLIUM Sieb. and Zucc. Rutaceae.

A graceful shrub, native to Japan, with attractive compound leaves and rather conspicuous clusters of greenish or brownish fruits in autumn.

77871. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From La Manuelita, Palmira, Colombia. Cuttings obtained from E. L. Anderson. Received November 22, 1928.

77872. TREMA ORIENTALIS (L.) Blume. Ulmaceae.

From Taiwan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received November 9, 1928.

No. 728. Obtained from the Taihoku Forest Office, October 11, 1928. A small evergreen tree, native to southern Asia, with cordate-lanceolate crenate leaves 6 inches long, silvery pubescent beneath, and small clusters of inconspicuous flowers followed by small dry fruits. This tree is said to be of high tannin content.

77873. HORDEUM BOGDAIN Hort. Poaceae. **Grass.**

77873—Continued.

From Kharkof, Russia. Seeds presented by Prof. D. C. Vilensky, Ukraine Institute of Applied Botany. Received November 5, 1928.

Saline barley. A new species of grass related to barley, which seems to be suited to saline conditions.

77874 and 77875.

From Valki, Kharkof, Russia. Seeds presented by the agronomist in charge of alfalfa investigations, Station de l'Ukraine. Received November 14, 1928.

77874. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

Variety from Kharkof.

77875. ONOBRYCHIS VULGARIS Hill (*O. viciaefolia* Scop.). Fabaceae. **Sanfoin.**

Variety from Ukrainia.

77876 to 77878. AMYGDALUS PERSICA L. Amygdalaceae. **Peach.**

From Pistoria, Tuscany, Italy. Plants purchased from Martino Bianchi. Received November 27, 1928.

These peaches are a cross between a hardy, late free-flowering Chinese peach and a variety Teton de Venus, originated in Tuscany, which ripens about the middle of August.

The trees are vigorous and bear heavy crops of fruit 3 to 4 inches in diameter. The flesh is greenish white, sweet and juicy, colored with carmine near the pit, from which it is easily removed.

77876. *Tos-China.* No. 1. Fruits ripen the last of September and continue through the first 10 days or so of October.

77877. *Tos-China.* No. 2. Fruits ripen during October.

77878. *Tos-China.* No. 3. Fruits ripen during November.

77879 to 77883. AVENA SATIVA L. Poaceae. **Oats.**

From Svalöf, Sweden. Seeds presented by A. Akerman, Sveriges Utsädesförening. Received November 23, 1928.

77879. *Seger* (victory).

77880. *Och eko* (echo). This variety was not bred at Svalöf, but came from the firm of W. Weibull, at Landskrona.

77881. *Guldregn I* (Goldenrain I).

77882. *Stjärn* (star).

77883. *Guldregn II* (Goldenrain II).

77884 to 77951.

From Madagascar. Seeds collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received in November, 1928.

77884. ACACIA MORONDAVENSIS Drake. Mimosaceae.

No. 5073. Upper Valley of Fiherenana, August 2, 1928. A tropical ornamental tree about 65 feet high.

77884 to 77951—Continued.

77885 to 77894. ALOE spp. Liliaceae.

77885. ALOE ANDRINGITRENSIS Perrier.

Botanic Garden, Tananarive, September 28, 1928. A stemless aloe, native to central Madagascar, with a rosette of 12 to 18 subfalcate leaves about 17 inches long. The leaves have horny margins and are armed with very small marginal spines. The dark orange-colored flowers are in dense racemes about 4 inches long.

77886. ALOE CAPITATA Baker.

Botanic Garden, Tananarive, September 28, 1928. An ornamental succulent with lanceolate leaves, less than 2 inches wide, narrowed gradually upward, and margined with spreading deltoid prickles. The yellow flowers are in headlike racemes of 30 or more flowers, on a peduncle less than a foot long. The inflorescence resembles that of *Aloe saponaria.*

77887. ALOE CAPITATA QUARTZITICOLA Perrier.

Botanic Garden, Tananarive, September 28, 1928. A stemless succulent plant with rather short thick leaves about 19 inches long, armed with stout red spines about two-fifths of an inch long. The yellow flowers are in a short dense head. This variety is native to quartzite regions in Madagascar.

77888. ALOE VAOMBE Decorse.

Botanic Garden, Tananarive, September 28, 1928. A large fleshy plant, native to sandy places in southwestern Madagascar. It becomes as much as 25 feet high, with incurved reddish spiny leaves up to 4 feet long and reddish-orange flowers in an erect head of 50 to 70 flowers.

77889. ALOE sp.

Between Betroka and Ihosy, September 19, 1928. Plant about 3 feet and inflorescence about 11 inches.

77890. ALOE sp.

La Table, Tullear, August 7, 1928.

77891. ALOE sp.

Ampanihy, September 3, 1928.

77892. ALOE sp.

Ampanihy, September 3, 1928.

77893. ALOE sp.

Diego Suarez, Montagne des Français, October 7, 1928.

77894. ALOE sp.

Mont Vatomavy, Ambositra, July 23, 1928.

77895. ARISTOLOCHIA ACUMINATA Lam. Aristolochiaceae.

La Table, Tullear, August 2, 1928. A vigorous ornamental vine native to the East Indies.

For previous introduction see No. 53612.

77896. ASSONIA sp. (*Dombeya* sp.). Sterculiaceae.

Valley of Fiherenana, August 3, 1928. An ornamental shrub or small tree native to Madagascar.

77884 to 77951—Continued.

77897. BAPHIA CAPPARIDIFOLIA Baker. Fabaceae.

No. 4026. Mananika, near Maevatanana, July 6, 1928. A shrub or tree, native to Madagascar, with slender branchlets, simple lanceolate leaves 2 to 3 inches long, and cymes of yellow flowers half an inch across.

For previous introduction see No. 77321.

77898. CITRUS GRANDIS (L.) Osbeck. Rutaceae. **Grapefruit.**

July 13, 1928. A variety with pink-fleshed fruits, about 20 inches in circumference, obtained in the market at Tananarive.

77899. CITRUS sp. Rutaceae.

Ivolena Experiment Station, Tamatave, October 2, 1928. *Vioangy.* Said to be an indigenous citrus plant.

77900. COMBRETUM sp. Combretaceae.

Diego Suarez, Montagne des Français, October 7, 1928. A climbing shrub with bright-red flowers.

77901 to 77904. CRYPTOSTEGIA MADAGASCARIENSIS Bojer. Asclepiadaceae. **Madagascar rubbervine.**

An important rubber plant occurring throughout a large portion of western Madagascar. There seems to be confusion between this and *Cryptostegia grandiflora,* which apparently is a more or less cosmopolitan species but which in Madagascar occurs only in the region south of Tullear. This plant is a shrub about 3 feet high, but occasionally it develops into a climber. The fibers of the plant are employed in making fishlines, and the Sakalavas recognize the plant as a source of an excellent cloth.

77901. Diego Suarez, Montagne des Français, October 7, 1928. *Lombira.*

77902. Andrahana village, north of Androka, August 24, 1928.

77903. Andrahana village, north of Androka, August 24, 1928.

77904. Upper Valley of Fiherenana, August 2, 1928.

77905. EUPHORBIA sp. Euphorbiaceae.

Beharahaka, between Androka and Ampanihy, August 29, 1928. *Harabaka.* A tree about 25 feet high, with a large amount of latex which contains some rubber. This was the largest Euphorbia seen in Madagascar.

77906. GONOCRYPTA sp. Asclepiadaceae.

North of Tullear. August 6, 1928. A rubber-bearing vine very different from *kompitso* of Ampanihy and Behara.

77907 to 77917. KALANCHOE spp. Crassulaceae.

77907. KALANCHOE DAIGREMONTIANA Hamet and Perrier.

Botanic Garden, Tananarive, September 28, 1928. A brownish-green succulent perennial native to Madagascar, becoming about 2 feet high. The leaves are petiolate, sometimes peltate, and the small deep-pink flowers are in lax terminal panicles.

77884 to 77951—Continued.

77908. KALANCHOE GRANDIDIERI Baill.

La Table, Tullear, August 7, 1928. An arborescent succulent plant, native to Madagascar, with a smooth stem 3 to 6 feet high. At the top of the stem a flower stalk, about 20 inches high, bears a paniclelike cluster of pendulous violet flowers.

77909. KALANCHOE LAXIFLORA Baker.

Botanic Garden, Tananarive, September 28, 1928. A fleshy perennial, native to Madagascar, with flowering stems 2 to 3 feet long and oblong crenate leaves about 3 inches long. The pale-yellow flowers two-thirds of an inch long are borne in large panicles a foot long.

77910. KALANCHOE SUAREZENSIS Perrier.

Botanic Garden, Tananarive, September 28, 1928. An erect fleshy biennial, native to Madagascar, about 2 feet high, with lanceolate leaves, up to 10 inches long, which bear bulblets at their tips. The flowers, with red calyxes and pink corollas, are in many-flowered paniclelike clusters.

77911. KALANCHOE SYNSEPALA Baker.

Botanic Garden, Tananarive, September 28, 1928. An erect succulent perennial, native to central Madagascar, with the lower leaves opposite, sessile, oblong-spatulate, and about 1½ inches long. The small reddish flowers are in dense terminal cymes.

77912. KALANCHOE sp.

Between Betroka and Ihosy, September 19, 1928. A species with brown leaves.

77913 and 77914. KALANCHOE TUBIFLORA Hamet.

An erect succulent perennial, about 2 feet high, native to Madagascar. The green cylindrical leaves, irregularly striped and blotched with reddish green, bear at the summit small oval-oblong lobes. At the approach of the wet season these lobes enlarge into pseudobulbils, by which the plant may be propagated. The red flowers are produced in a rather dense cluster terminating the stem.

77913. South of Betroka, on the highway to Antanimora, September 18, 1928.

77914. On the highway between Betroka and Ihosy, September 19, 1928.

77915. KALANCHOE sp.

South of Betroka, September 18, 1928. A species with large leaves.

77916. KALANCHOE sp.

Between Betroka and Ihosy, September 19, 1928. An ornamental succulent about a foot high. The leaves, with brownish-red margins, are about 6 inches in length.

77917. KALANCHOE sp.

Behara, September 10, 1928.

77918. KIGELIA MADAGASCARIENSIS Baker. Bignoniaceae.

77884 to 77951—Continued.

Betioky, August 23, 1928. A shrub about 15 feet high, with showy red, pink, or orange flowers about 7 inches in diameter. This plant occurs widely throughout southern Madagascar. Although the plant itself is somewhat straggly looking, because of the enormous flowers which are borne in winter while there are no leaves, it presents a striking appearance.

77919. KALANCHOE sp.

Ampanihy, September 6, 1928. A shrubby succulent with thick fleshy ovate leaves having rust-colored tomentum above and silver below, both getting dingy with age. Native to Madagascar.

77920. KALANCHOE LAXIFLORA Baker.

Mont Vatomavy (Andohahano), northwest of the village of Adena, Ambositra, at an altitude of about 6,000 feet. Similar to 77909, but the stems, petioles, and leaf margins have a decided reddish tinge.

77921. MARSDENIA VERRUCOSA (Bojer) Decaisne. Asclepiadaceae.

These seeds were obtained either at Itrobeka, Ampanihy, where the cuttings [No. 78441] were collected, or near Tongobory, where specimens were obtained.

77922 to 77928. MASCARENHASIA spp. Apocynaceae.

77922. MASCARENHASIA ARBORESCENS A. DC.

Hazondrano. Collected between Ambositra and Ihosy, July 27, 1928.

77923. MASCARENHASIA sp.

Ihosy, July 29, 1928. *Hazondrano.* A rubber-bearing shrub about 12 feet high, which is similar to No. 77928 but probably different.

77924. MASCARENHASIA sp.

Ihosy, September 20, 1928. This may be the same as No. 77923.

77925. MASCARENHASIA sp.

Majunga. This is not the true *kompitso.*

77926. MASCARENHASIA sp.

Ampanihy, September 3, 1928. *Kompitso.* This species is similar to and perhaps identical with No. 78455, cuttings from Behara. On casual examination it seems to be much like Mascarenhasia, except that the seed pods of this are only about 3 inches long. Possibly this is actually *Gonocrypta grevei,* which is supposedly the plant in this region known as *kompitso.* Considerable rubber is shipped out of Ampanihy each year, all of it being known as *kompitso,* but the natives said that this contains a mixture of rubbers from various plants.

77927. MASCARENHASIA sp.

Betioky, August 15, 1928. *Hazondrano.*

77928. MASCARENHASIA ARBORESCENS A. DC.

Majunga, July 29, 1928. *Hazondrano.* This shrub is identical with that of No. 78443.

77884 to 77951—Continued.

77929. MEGISTOSTEGIUM RETUSUM Hochr. Malvaceae.

South of Lake Tsimanampetsotsa. A tree, native to Madagascar, 12 to 15 feet high, with thick, tortuous branches, gray, wrinkled bark, clusters of broadly elliptic, whitish leaves at the ends of the branches, and axillary, solitary flowers about 2½ inches across.

77930. PACHYPODIUM sp. Apocynaceae.

Diego Suarez, Montagne des Français, October 7, 1928. A white-flowered, very thorny succulent ornamental, about 12 feet high, which is especially promising for rock gardens.

77931. RUBUS sp. Rosaceae.

Ambalavao, September 20, 1928. This, or a similar species, occurs throughout much of Madagascar.

77932. SECAMONE sp. Asclepiadaceae.

Ysalo, Ranohira, July 30, 1928. A rubber-bearing shrub.

77933. SENECIO ANTANDROI S. Elliott. Asteraceae.

Upper Valley of Fiherenana, September 19, 1928. A shrubby composite, native to Madagascar, with subcylindrical leaves nearly 2 inches long, and small flower heads in lax corymbs.

77934. SENECIO sp. Asteraceae.

Between Betroka and Ihosy, September 19, 1928. An ornamental, native to Madagascar.

77935. STEREOSPERMUM sp. Bignoniaceae.

Upper Valley of Fiherenana, August 1, 1928. An ornamental tree, about 18 feet high, native to Madagascar.

77936. STRYCHNOS sp. Loganiaceae.

Obtained in the market at Maevatanana, July 6, 1928.

77937. URENA LOBATA L. Malvaceae.

Madriovala, Valley of Betsiboka, July 5, 1928. *Tsikilenjy* (Malagasy); *pace* (French). An erect undershrub with cordate entire or lobed leaves 2 to 3 inches long, flowers an inch across, rose-red at the base, and small fruits armed with hooked bristles. The stems furnish a fiber used for bags and twine.

For previous introduction see No. 77325.

77938. VERNONIA sp. Asteraceae.

Amber Mountains, Diego Suarez, October 6, 1928. A plant about 6 feet high, with lilac flowers.

77939. (Undetermined.)

Between Betroka and Ihosy, September 19, 1928. A rubber-bearing climbing shrub.

77940. (Undetermined.)

Between Betroka and Ihosy, September 19, 1928. A rubber-bearing liane which is different from No. 77939.

77941. (Undetermined.)

Between Lake Tsimanampetsotsa and Itampolo, August 22, 1928. A rubber-bearing plant.

77884 to 77951—Continued.

77942. (Undetermined.)

Ampanihy, September 6, 1928. *Boka.* A rubber-bearing plant which furnishes a poor substitute for the good *kompitso* [No. 77926].

77943. (Undetermined.)

Ihosy, July 29, 1928. A rubber-bearing plant with large fruits. It may be the same plant as Nos. 78470 and 78472.

77944. (Undetermined.)

Amber Mountains, Diego Suarez, October 6, 1928. A yellow-flowered composite.

77945. (Undetermined.)

Amber Mountains, Diego Suarez, October 6, 1928. An ornamental blue-flowered subshrub about 3 feet high.

77946. (Undetermined.)

Diego Suarez, Montagne des Français, October 7, 1928. An ornamental shrub with orange flowers.

77947. (Undetermined.)

Ampanihy, September 7, 1928. *Alombora.* A leguminous tree about 45 feet high, the source of leety, of which a considerable quantity is shipped from Ampanihy to be used as a substitute for Japanese lac.

77948. HIBISCUS SURATTENSIS L. Malvaceae.

Anjouan, Mutsamudu, Comoro Islands. An ornamental malvaceous creeper with large orange and red flowers 4 inches in diameter.

77949. (Undetermined.)

La Table, Tullear, August 7, 1928.

77950. (Undetermined.)

Highway between Ihosy and Ambalavao, September 20, 1928. An ornamental shrub about 6 feet high, with orange-red flowers. It is very similar to No. 77951.

77951. WOODFORDIA FRUCTICOSA PUNCTATA (Buch.-Ham.) Koehne. Lythraceae.

Diego Suarez, Montagne des Français. An ornamental shrub about 6 feet high, with orange-red flowers. It is very similar to No. 77950.

77952. FICUS ROXBURGHII Wall. Moraceae. Fig.

From Orotava, Tenerife, Canary Islands. Plant presented by Juan Bolinaga, director of the Orotava Botanic Gardens, through Raleigh A. Gibson, American consul, Tenerife. Received July 14, 1928. Numbered in November, 1928.

A low spreading evergreen tree, native to India, 20 to 30 feet high, with broadly ovate-cordate entire or toothed leaves and russet-brown or purple fruits 2 inches in diameter.

For previous introduction see No. 77050.

77953 and 77954.

From Madagascar. Seeds collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received in November, 1928.

77953 and 77954—Continued.

77953. (Undetermined.)

Upper Valley of Fiherenana. An ornamental, about 3 feet high, belonging to the mint family.

77954. (Undetermined.)

Southern Madagascar. An oil plant.

77955 to 77958.

From Manila, Philippine Islands. Bulbs presented by H. E. Stafford. Received November 27, 1928.

77955. HIPPEASTRUM sp.

Blue Nile.

77956. HIPPEASTRUM sp.

Iday. Double scarlet.

77957. HAEMANTHUS MULTIFLORUS Martyn.

Small scarlet.

77958. HIPPEASTRUM sp.

77959. MUCUNA BENNETTI F. Muell. Fabaceae.

From Urika, Port Moresby, New Guinea. Seeds presented by George Moir Smith, London Missionary Society. Received July 13, 1928. Numbered in December, 1928.

D'Albertis creeper. A climbing vine with leaves made up of three ovate-lanceolate glabrous leaflets 3 to 5 inches long, and bearing short racemes of large showy scarlet flowers. It grows in New Guinea on the banks of rivers or in swampy places.

77960 to 77973.

From Briagolong, Gippsland, Victoria, Australia. Seeds presented by R. R. Penny, through C. R. Tillotson, Forest Service. Received November 14, 1928.

77960 to 77963. ACACIA spp. Mimosaceae.

77960. ACACIA GLAUCESCENS Willd.

A tree, native to Australia, up to 50 feet high, with flowers in axillary spikes 1 to 2 inches long, and branchlets and phyllodes covered with an ashy gray pubescence.

For previous introduction see No. 75591.

77961. ACACIA LONGIFOLIA FLORIBUNDA (Vent.) F. Muell.

A shrub or small tree, native to Australia.

77962. ACACIA PRUINOSA A. Cunn.

An ornamental shrub or tree, native to Australia.

77963. ACACIA SPECTABILIS A. Cunn.

Mudgee acacia. An ornamental shrub or tree native to Australia.

77964. BANKSIA COLLINA R. Br. Proteaceae.

An evergreen shrub up to 12 feet high, native to Australia, with tomentose branchlets, linear leaves 2 to 3 inches long, white beneath, and terminal spikes of large greenish-yellow flowers.

77965. DAVIESIA LATIFOLIA R. Br. Fabaceae.

Wild hop. A glabrous shrub up to 5 feet high native to Australia, with coriaceous ovate-lanceolate entire leaves 3 inches long and short racemes of orange-yellow, pea-shaped flowers.

77966 to 77968. EUCALYPTUS spp. Myrtaceae.

77966. EUCALYPTUS CINEREA F. Muell.

Silver stringybark. A moderate-sized tree, native to Australia, with whitish-brown bark, opposite cordate leaves 2 to 4 inches long, and terminal corymbs of small flowers, followed by small subglobose fruits.

77967. EUCALYPTUS MUELLERIANA Howitt. **Yellow stringybark.**

A tree, native to Australia.

For previous introduction see No. 38730.

77968. EUCALYPTUS sp.

An ornamental tree, native to Australia, with large red flowers.

77969. GOODIA LOTIFOLIA Salisb. Fabaceae.

An ornamental shrub, native to Australia, with three ovate leaflets and loose racemes of purple-spotted yellow flowers.

For previous introduction see No. 30017.

77970. KENNEDIA MONOPHYLLA Vent. (*Hardenbergia monophylla* Benth.). Fabaceae.

Purple coral pea. A vine, native to Australia, with single lanceolate leaflets, terminal panicles, and axillary racemes of flowers ranging from white through rose to purple.

For previous introduction see No. 76920.

77971. LIVISTONA AUSTRALIS (R. Br.) Mart. Phoenicaceae. **Australian fan palm.**

Cabbage tree palm. A tall slender palm, 100 to 130 feet high and 12 to 18 inches in diameter. The moderately hard wood is light colored and is occasionally used for light construction. The leaves are used for baskets; and the unexpanded fronds, after being dipped in boiling water, are shredded and the fiber used in making hats resembling the Panama variety.

For previous introduction see No. 45092.

77972. PROSTANTHERA ROTUNDIFOLIA R. Br. Menthaceae.

Purple mint bush. A bushy shrub, native to Australia, which is 7 feet high, with orbicular leaves less than half an inch long and small purplish 2-lipped flowers in close terminal racemes.

77973. RICINOCARPUS PINIFOLIUS Desf. Euphorbiaceae.

Bedding bush. A shrub 2 to 3 feet high, with linear sharp-pointed leaves having the edges rolled into the midrib, terminal clusters of small flowers, and globular spiny capsules. Native to Australia.

77974. CORCHORUS CAPSULARIS L. Tiliaceae. **Jute.**

From Monte Christi, Dominican Republic. Seeds presented by Theodore Harris.

77974—Continued.

through L. H. Dewey, Bureau of Plant Industry. Received November 30, 1928.

Bombai. A variety which was originated at the experiment station at Decca, India.

77975 to 77977. MAGNOLIA CAMPBELLII Hook. f. and Thoms. Magnoliaceae.

From Darjiling, India. Seeds presented by J. E. Leslie, Curator, Lloyd Botanic Garden. Received November 30, 1928.

A beautiful deciduous magnolia from the Himalayas, where it ascends to 8,000 feet above sea level. It reaches a height of 80 feet, has very dark bark, large elliptical dark-green leaves, and flowers 10 inches in diameter. This magnolia has flowered freely in southern France and Italy.

For previous introduction see No. 61771.

77975. A red-flowered variety.

77976. A pink-flowered variety.

77977. A white-flowered variety.

77978. ANANAS SATIVUS (L.) Schult. f. Bromeliaceae. **Pineapple.**

From Grenada, British West Indies. Cuttings presented by W. O'Brien Donovan, agricultural officer in charge, Department of Agriculture. Received December 3, 1928.

Black Antigua.

77979. BRADBURYA PUBESCENS (Benth.) Kuntz (*Centrosema pubescens* Benth.). Fabaceae.

From Peradeniya, Ceylon. Seeds purchased from the manager of the publication depot and central seed store of the Department of Agriculture. Received December 3, 1928.

A tropical American leguminous vine with trifoliolate leaves and small yellowish flowers, which is used as a cover crop.

For previous introduction see No. 77293.

77980. MUSA GLAUCA Roxb. Musaceae. **Banana.**

From Medan, Sumatra. Seeds presented by J. A. Lörzing. Received July 7, 1928. Numbered in November, 1928.

An Indian banana with a trunk 10 to 12 feet high, short-petioled lanceolate leaves 4 to 5 feet long, and a drooping spike of small flowers and inedible fruits which are hidden by the large bracts.

For previous introduction see No. 67719.

77981. CALAMUS ORNATUS PHILIPPINENSIS Beccari. Phoenicaceae. **Palm.**

From Leyte, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received November 17, 1928.

Kalapi. A spiny climbing pinnate-leaved palm producing edible ellipsoid fruits 1½ inches long with pulp which cooks up into a sirup having a fine flavor.

77982 and 77983. CANARIUM OVATUM Engler. Balsameaceae. **Pili nut.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received December 3, 1928.

77982 and 77983—Continued.

A tree at times 130 feet high, with dark-green pinnate leaves over a foot long and triangular-pointed, brown, usually thick-shelled nuts inclosing a kernel which is covered with a thin shining black skin. The nuts are excellent when eaten raw or roasted, and are of high food value. Pili nuts as grown in the Philippine Islands are very variable in quality. These two varieties have such thin shells they may be cracked with a nutcracker.

For previous introduction see No. 61253.

77982. No. 1. 77983. No. 2.

77984. GOSSYPIUM OBTUSIFOLIUM AFRICANUM Watt. Malvaceae. **Cotton.**

From Madagascar. Seeds collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received November, 1928.

No. 4429. Mananika, Valley of Betsiboka. A half-woody shrub, about 6 feet high, which differs from the Indian form in having more copious and finer wool. The flowers are yellow, changing to reddish. Native to tropical Africa.

For previous introduction see No. 77323.

77985 to 77987.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson, American Board Mission in South Africa. Received November 15, 1928.

77985 and 77986. ELEUSINE CORACANA (L.) Gaertn. Poaceae. **Ragi.**

For previous introduction see No. 73172.

77985. *Mgoza.* This variety grows more rapidly than *Giant mgoza* [No. 77986.]

77986. *Giant mgoza.* A variety which grows 3 feet high and needs good soil, tropical weather, and a fairly long season.

77987. LOVOA SWYNNERTONII Baker f. Meliaceae.

Brown mahogany. A valuable Rhodesian timber tree, reaching a height of 200 feet and a diameter of 8 feet.

For previous introduction see No. 35459.

77988. GOSSYPIUM HERBACEUM L. Malvaceae. **Cotton.**

From Persia. Seeds obtained through the Turkestan Plant Breeding Station, Tashkent, by J. J. Thornber, College of Agriculture and Agricultural Experiment Station of the University of Arizona, Tucson. Received November 27, 1928.

Panbe.

77989 to 77992. LYCORIS spp. Amaryllidaceae.

From Yokohama, Japan. Bulbs purchased from the Yokohama Nursery Co. Received December 6, 1928.

77989. LYCORIS AUREA (L'Her.) Herbert.

A Chinese bulbous perennial with sword-shaped leaves which die down before the appearance of the golden-yellow

77989 to 77992—Continued.

flowers; the latter are 3 to 4 inches across, borne in an umbel on a scape 1 to 3 feet high.

For previous introduction see No. 77586.

77990. LYCORIS RADIATA (L'Her.) Herbert.

A Japanese bulbous perennial with bright-red flowers.

For previous introduction see No. 45527.

77991. LYCORIS SANGUINEA Maxim.

A Japanese bulbous perennial with linear leaves which die down before the red flowers appear in an umbel on a scape 12 to 18 inches high.

For previous introduction see No. 77587.

77992. LYCORIS SQUAMIGERA Maxim.

A Japanese bulbous perennial with linear leaves which die down before the appearance of the rosy lilac fragrant flowers.

For previous introduction see No. 77588.

77993 to 77995.

From China. Seeds collected by J. F. Rock, National Geographic Society, Washington, D. C. Received November 19, 1928.

77993. PRUNUS sp. Amygdalaceae.

No. 16139. A very common species on the hillsides of Muli, below Muli Monastery, southwestern Szechwan, at altitudes between 9,000 and 9,600 feet. It is a shrub 6 to 8 feet high, branching from the base, with long whiplike branches. The large white flowers, very ornamental when in full bloom, are borne during May, and the oval red fruits are produced in August.

77994. PRUNUS sp. Amygdalaceae.

No. 17227. A species found wild in Yungning Territory, east of the Yangtze River, on the slopes of Gouwua, Yunnan, at an altitude of 9,000 feet. It is a tree 15 to 20 feet high, with oblong-serrate leaves and small edible brick-red fruits which are produced during May. It may prove to be a good stock plant.

77995. RUBUS sp. Rosaceae.

No. 17278. A species found in forests of fir and larch at an altitude of 13,500 feet on the snow mountain called La Chou Chou K'ha, south of Chungtien, September, 1928. It is a shrub 3 feet high, producing fairly large orange-red to red fruits which are edible and sweet.

77996. FICUS BELLENGERI C. Moore. Moraceae. **Fig.**

From Sydney, New South Wales, Australia. Seeds presented by Dr. G. P. Darnell-Smith, Director, Botanic Gardens. Received November 23, 1928.

A tall tree, native to New South Wales, with leathery ovate leaves 6 inches long, dark green above and light green beneath, and reddish fruits 2 to 3 inches in diameter.

77997. CORYNOCARPUS LAEVIGATA Forst. Corynocarpaceae. **Karaka.**

From Lisbon, Portugal. Seeds presented by Joaquim Rasteiro, Instituto Superior de Agronomia. Received December 4, 1928.

77997—Continued.

An ornamental tree, native to New Zealand, with a round crown and oblong evergreen leaves up to 7 inches in length. The small white flowers are in erect panicles about 4 inches high, and the oblong orange fruits are about an inch long. The flesh of the fruits is extremely poisonous, but the kernel is not; it was one of the staple articles of diet of the Maoris, the original inhabitants of New Zealand.

For previous introduction see No. 77184.

77998. DIGITARIA ERIANTHA STOLONIFERA Stapf. Poaceae. **Grass.**

From Pretoria, Union of South Africa. Plants presented by Dr. I. B. Pole Evans, chief of the Division of Botany, Horticulture, and Entomology of the Department of Agriculture, through H. N. Vinall, Bureau of Plant Industry. Received October 30, 1928.

Woolly finger grass, a native of South Africa, is essentially a dry-land grass; it prefers a loose sandy soil, but is also found in the hard red soil and occasionally in black turf. It does not do well in localities that have very moist winter conditions and does not take kindly to irrigation, except in localities where the rainfall is very low. This Digitaria is very palatable to stock of all kinds, equally so in winter and summer. In the summer it makes a mass of succulent green herbage and provides sufficient moisture and nourishment for stock; in the winter it becomes dried and sun cured, but the nourishment is still there, and, with the addition of a few cactus leaves for moisture, animals will keep in good condition on it throughout the dry frosty season.

77999. AMPELOCISSUS MARTINI Planch. Vitaceae.

From Mindoro, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received December 5, 1928.

Variety *Mindorensis*. An ornamental vine, native to the Philippine Islands, which should do well in the sandy soils in southern and central Florida. It makes a large tuberous root, and the vines, which are covered with stiff hairs, die annually after fruiting. The grapelike fruits make excellent jelly.

78000 to 78002. AVENA SATIVA L. Poaceae. **Oats.**

From Cambridge, England. Seeds presented by F. C. Hawkes, assistant director, National Institute of Agricultural Botany. Received December 4, 1928.

78000. No. 830. *Plentiful.*

78001. No. 1038. *Viking.*

78002. No. 1052. *Quite Content.*

78003 to 78031. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received October and November, 1928.

Wild varieties unless otherwise stated.

78003. No. 703. Collected in Shizukuishi Mura, Iwate Gun, Iwate Ken, by Saichi Tanito, and forwarded by the Morioka National District Forest Bureau.

78003 to 78031—Continued.

78004. Nos. 704 to 711. Obtained at Takizawa, Takizawa Mura, Iwate Gun, Iwate Ken, through the Iwate Ken forester at Morioka.

78005. Nos. 712 and 715. From the Agricultural Association at Yatomi Mura, Gujo Gun, Gifu Ken.

78006. No. 713. Collected by Morisaburo Sasaki at Nakui Dake, Kaminakui, Nakui Mura, Sannohe Gun, Aomori Ken.

78007. No. 714. Collected by Morisaburo Sasaki at Nakui Dake, Kaminakui, Nakui Mura, Sannohe Gun, Aomori Ken.

78008. Nos. 716 and 717. Collected by Yamazaki Eirinsho in the Akasai National Forest at Okutani Mura Hara, Soshi Gun, Hyogo Ken.

78009. No. 718. Collected at Shimohara Mura, Masuta Gun, Gifu Ken, and sent by the Agricultural Association.

78010. No. 719. Collected by Morisaburo Sasaki in the forest belonging to the Tsugaru Daimyo, Hyakuzawa Mura, Naka Tsugaru Gun, Aomori Ken.

78011. No. 720. Collected by Morisavuro Sasaki in the Iwakiyama National Forest, Takaoka, Hyakuzawa Mura, Naka Tsugaru Gun, Aomori Ken.

78012. No. 721. Sent by Nichihara Eirinsho from Nichihara, Shimaie Ken.

78013. No. 721–A. Collected by Morisaburo Sasaki in the Iwakiyama National Forest, Takaoka, Hyakuzawa Mura, Naka Tsugaru Gun, Aomori Ken.

78014. No. 721–B. Sent by Nichihara Eirinsho from Nichihara, Shimaie Ken.

78015. No. 722. Collected at Ogura Yama, Chitose Mura, Naka Tsugaru Gun, Aomori Ken, and sent by Morisaburo Sasaki.

78016. No. 723. Collected at Orikasa Mura, Shimo Hei Gun, Iwate Ken, and sent by Gisaburo Takenchi, Director of Miyako Eirinsho, Iwate Ken.

78017. No. 724. Collected at Mizu Kiyo Daki, Nango Mura, Hirashi Usuki Gun, Miyazaki Ken, and sent by Mimitru Eirinsho, Miyazaki Ken.

78018. No. 725. Collected in Toyomane, Shimo Hei Gun, Iwate Ken, and sent by Miyako Eirinsho, Iwate Ken.

78019. No. 726. Sent by Shinsaburo Suda, Ginyose, Kyoto. A cultivated variety good for stock.

78020. No. 727. Sent by Shinsaburo Suda, Shino, Shino Mura, Minami Kuwada Gun, Kyoto Fu. *Imakita.* A cultivated variety good for stock.

78021. No. 728. Collected in Nishi Yasuniwa, Gosho Mura, Iwate Gun, and sent from Morioka Eirinsho.

78022. No. 729. Collected in the University Forest, Wakayama Ken, and sent by Doctor Ichikawa, Kyoto Imperial University.

78023. No. 730. Collected at Bonju Zau, Nozato, Nagahashi Mura, Kita Tsugaru Gun, Aomori Ken, and sent by Morisaburo Sasaki.

78024. No. 731. Sent by the Funatsucho Agricultural Association, Yoshi Gun, Gifu Ken.

78003 to 78031—Continued.

78025. No. 731–B. Sent by the Funatsucho Agricultural Association, Yoshi Gun, Gifu Ken.

78026. No. 732. A purely native Hokkaido variety collected in Kamidai, Mori Machi, Kayabe Gun, Oshima Province, Hokkaido, and sent by Tetsuyo Hironaka, Hakodate, Oshima. The local name is Kayabe guri.

78027. No. 733. A purely native Hokkaido variety collected at Kamidai, Mori Machi, Kayabe Gun, Oshima Province, Hokkaido, and sent by Tetsuyo Hironaka, Kakodate, Oshima. The nuts are larger than those of No. 732 [No. 78026], otherwise there is no apparent difference.

78028. No. 734. Sent by Morisaburo Sasaki, Hiroto, Fukaura Mura, Nishi Tsugaru Gun, Aomori Ken.

78029. No. 735. Collected in the No Kami National Forest, Sannai Zai, Iwami Sannai Mura, Kawabe Gun, Akita Ken, and sent by Cho Mishima, of Akita Eirinsho.

78030. No. 736. Collected in the No Kami National Forest, Sannai Zai, Iwami Sannai Mura, Kawabe Gun, Akita Ken, and sent by Cho Mishima, of Akita Eirinsho.

78031. No. 734–A. Sent by Morisaburo Sasaki, Hiroto, Fukaura Mura, Nishi Tsugaru Gun, Aomori Ken.

78032 and 78033.

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received November 27, 1928.

78032. SESBANIA CANNABINA (Retz.) Poir. Fabaceae.

Jore-tore. From Manila. A tall upright leguminous herb growing in wet lands. It may have possibilities as a green-manure crop.

78033. (Undetermined.)

From Mindoro.

78034. MALUS LEMOINEI Hort. Malaceae.

From Woodbridge, England. Plants purchased from R. C. Notcutt. Received December 10, 1928.

An attractive flowering crab with dark bronze-colored foliage and single deep crimson flowers which are freely produced.

78035. LAVANDULA SPICA L. Menthaceae. **Lavender.**

From Montbrun, Drôme, France. Seeds presented by H. Reynaud & Sons through Fritzsche Bros., New York, N. Y. Received December 7, 1928.

Genuine French lavender.

78036. MESEMBRYANTHEMUM ANGULATUM Thunb. Aizoaceae.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received December 5, 1928.

A herbaceous procumbent succulent with angular stems and branches, which is native to South Africa. The leaves are op-

78036—Continued.

posite on the stem, alternate on the branches, and are covered with minute white papillae.

For previous introduction see No. 75853.

78037. VIBURNUM PAUCIFLORUM Raf. Caprifoliaceae.

From Alaska. Obtained from Charles H. Flory, Commissioner of Alaska, through G. M. Darrow, Bureau of Plant Industry. Received December 7, 1928.

Collected near Sea Beach, Lynn Canal, Tongass National Forest, in October, 1928. A straggling Alaskan shrub, 3 to 5 feet high, with suborbicular 3-lobed leaves, cymes of white flowers, and edible red fruits. It is closely related to the European cranberrybush, *V. opulus*, and to the American cranberrybush, *V. trilobum*.

78038. EREMOCHLOA ZEYLANICA Hack. Poaceae. **Grass.**

From Peradeniya, Ceylon. Seeds presented by the Director, Department of Agriculture. Received December 11, 1928.

A perennial grass, native to Ceylon, 12 to 18 inches high, with narrow leaves and slender spikes. Of possible value for lawns and pastures.

78039. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Nairobi, Kenya Colony, Africa. Seeds presented by H. E. A. Durham, office of the chief accountant, General Post Office, through L. W. Kephart, Bureau of Plant Industry. Received December 11, 1928.

Seeds taken from a fruit weighing 5 pounds, the approximate weight of each fruit on the tree. The tree has been grown in the coldest place in this vicinity, so that the seeds would have the best chance for success in the United States.

78040 to 78111.

From Orleans, France. Plants purchased from E. Turbat & Co. Received November 17, 1928.

78040 to 78050. BUXUS spp. Buxaceae. **Box.**

78040. BUXUS BALEARICA Willd.

An evergreen shrub, 10 to 15 feet high, native to the Balearic Islands. The oblong leaves are 1 to 2 inches long and more than half an inch wide.

For previous introduction see No. 76557.

78041 and 78042. BUXUS MICROPHYLLA JAPONICA (Muell. Arg.). Rehder. **Japanese box.**

An evergreen shrub, native to Japan, up to 6 feet high with spreading branches and light-green, rounded-obovate cuneate leaves an inch or less long.

78041. Variety *aurea*.

78042. Variety *rotundifolia macrophylla*.

78043 to 78050. BUXUS SEMPERVIRENS L. **Common box.**

78043. *Angustifolia.* Lanceolate-oblong leaves.

78044. *Aurea variegata.* Leaves variegated with yellow or entirely yellow.

78040 to 78111—Continued.

78045. *Elegantissima variegata.*

78046. *Glauca.* Leaves glaucous, oval.

78047. *Handsworthii.* Shrub of upright habit with large dark-green leaves.

78048. *Navicularis.*

78049. *Pyramidalis variegata.* Upright pyramidal habit, with variegated foliage.

78050. *Salicifolia elata.* Spreading habit and narrow willowlike leaves.

78051 to 78066. CEANOTHUS spp. Rhamnaceae.

78051. CEANOTHUS sp.

Albert Pittet. Pink flowers.

78052. CEANOTHUS sp.

Albus plenus.

78053. CEANOTHUS sp.

Bijou. Clear lilac pink.

78054. CEANOTHUS sp.

Ceres. Pink flowers.

78055. CEANOTHUS sp.

Coquetterie. Brilliant rose-carmine flowers.

78056. CEANOTHUS sp.

George Simon. Lilac-rose flowers.

78057. CEANOTHUS sp.

Gladiateur.

78058. CEANOTHUS sp.

Gloire de Plantières. Azure-blue flowers.

78059. CEANOTHUS sp.

Gloire de Versailles. Deep azure-blue flowers.

78060. CEANOTHUS sp.

Ibis rose.

78061. CEANOTHUS sp.

Indigo. Indigo-blue flowers.

78062. CEANOTHUS sp.

Marie Simon. Flesh-colored flowers.

78063. CEANOTHUS sp.

Perle rose. Carmine-rose flowers.

78064. CEANOTHUS sp.

Pinguet Guindon. A vigorous sort with erect branches, large green leaves, and dense pyramidal trusses of dark carmine-lilac flowers which have deep-carmine pedicels.

78065. CEANOTHUS sp.

Richesse. Pure-rose flowers.

78066. CEANOTHUS sp.

Roseus carmineus. Carmine-pink flowers.

78067 to 78076. CHAENOMELES LAGENARIA (Lois.) Koidz. (*Cydonia japonica* Pers.). Malaceae. **Japan quince.**

78067. *Alba Plena.*

78068. *Boule de Feu.*

78040 to 78111—Continued.

78069. *Cardinalis.*

78070. *Moerlosei.*

78071. *Pyginea.*

78072. *Rosea grandiflora.*

78073. *Rubra grandiflora.*

78074. *Sanguinea.*

78075. *Simonsi.*

78076. *Umbrillicata.*

78077 to 78082. DEUTZIA spp. Hydrangeaceae.

78077. DEUTZIA VILMORINAE Lemoine.

A shrub 4 to 6 feet high, of vigorous growth, with pure-white flowers nearly an inch across in loose clusters, suggestive of some of the smaller-growing kinds of Philadelphus, a resemblance which is increased by the lateness of its flowering period. It is native to China.

For previous introduction see No. 49944.

78078. DEUTZIA sp.

Crenata magnifica. Pure-white, double flowers in short dense panicles nearly 2 inches long.

78079. DEUTZIA sp.

Discolor elegantissima. Open rosy white flowers about three-fourths of an inch across, in many-flowered loose corymbs.

78080. DEUTZIA sp.

Discolor floribunda. Flowers white, pink on the outside, in rather dense upright panicles.

78081. DEUTZIA sp.

Discolor grandiflora. Buds pink and flowers rosy white; similar to the preceding, but with looser panicles.

78082. DEUTZIA sp.

Discolor major. Large white flowers, rose tinged on the outside, about an inch across.

78083. JASMINUM STEPHANENSE Javit. Oleaceae. **Jasmine.**

A vigorous climbing shrub with terminal racemes of fragrant pink flowers. It is a hybrid between *Jasminum officinale* and *J. beesianum.*

78084. LIGUSTRUM HENRYI Hemsl. Oleaceae. **Privet.**

An ornamental evergreen shrub up to 12 feet high, with dark-green rounded-oval leaves 2 inches or less long, small white flowers in a pyramidal cluster, and blue-black berries. It is native to China.

78085 to 78106. PHILADELPHUS spp. Hydrangeaceae.

78085. PHILADELPHUS sp.

Albatre. Very floriferous; pure-white flowers on gracefully arching stems.

78086. PHILADELPHUS sp.

Argentine. An erect shrub with fragrant, very double, white flowers 2 inches or more across.

78040 to 78111—Continued.

78087. PHILADELPHUS sp.

Banniere. Semidouble, snow-white flowers 2½ inches across.

78088. PHILADELPHUS sp.

Belle Etoile. A vigorous variety bearing an abundance of large, well-expanded, sweet-scented flowers which have milk-white petals with a purple blotch. This is said to be the showiest and hardiest of the purple-eyed varieties.

78089. PHILADELPHUS sp.

Boule d'Argent. Double, fragrant flowers.

78090. PHILADELPHUS sp.

Bouquet Blanc. A tall shrub with large leaves and large dense compact clusters of double or semidouble flowers.

78091. PHILADELPHUS sp.

Dame Blanche. Numerous small panicles of creamy white, semidouble, fragrant flowers.

78092. PHILADELPHUS sp.

Enchantement. A variety bearing dense panicles of double white flowers of the most striking appearance on long erect branches.

78093. PHILADELPHUS sp.

Gerbe de Neige. Very fragrant single flowers.

78094. PHILADELPHUS sp.

Girandole. Double white flowers.

78095. PHILADELPHUS sp.

Glacier. Double white flowers in erect compact clusters, borne on stout erect stems.

78096. PHILADELPHUS sp.

Manteau d'Hermine. Double flowers.

78097. PHILADELPHUS sp.

Mont-Blanc. Single fragrant flowers, borne in great profusion.

78098. PHILADELPHUS sp.

Norma. Large semidouble flowers, almost completely covering the long slender arching branches.

78099. PHILADELPHUS sp.

Nuage rose. Flowers very large, white with rose-tinted center, sweetly fragrant.

78100. PHILADELPHUS sp.

Pavillon Blanc. Large single white flowers.

78101. PHILADELPHUS sp.

Perle Blanche.

78102. PHILADELPHUS sp.

Purpureo maculatus. A dwarf bush with large single flowers, white with a large rosy purple spot at the base of each petal.

78103. PHILADELPHUS sp.

Pyramidal. Double white flowers on erect branches.

78040 to 78111—Continued.

78104. PHILADELPHUS sp.

Rosace. An erect bush, with slender branches and double creamy white flowers, becoming pure white.

78105. PHILADELPHUS sp.

Sybille. Large cup-shaped flowers, white spotted pale pink at the base, on long curved branches.

78106. PHILADELPHUS sp.

Voie Lactée. Very large round, glossy, snow-white flowers.

78107. SARCOCOCCA HOOKERIANA (Hook.) Baill. Buxaceae.

An evergreen shrub 6 to 8 feet high, native to Afghanistan, with coriaceous lanceolate entire leaves 2 to 4 inches long, axillary racemes of small whitish fragrant flowers, and subglobose black fruits.

78108 to 78110. SKIMMIA spp. Rutaceae.

78108. SKIMMIA FOREMANII ROGERSII Rehder.

A rather small compact evergreen shrub with deep-green lanceolate leaves and small crimson berries. Of garden origin.

78109. SKIMMIA JAPONICA Thunb. (*S. oblata* C. T. Moore).

A dense evergreen shrub, 4 feet or less high, native to Japan. The leaves, crowded at the ends of the branches, are elliptic-oblong in shape, and the small yellowish and white flowers are followed by bright-red berries.

For previous introduction see No. 71985.

78110. SKIMMIA REEVESIANA RUBELLA (Carr.) Rehder (*S. rubella* Carr.).

This Chinese species is similar to *Skimmia japonica*, but is more dwarfed in habit. The dark-green leaves are narrow and acuminate, the white flowers are in oblong panicles, and the fruits are dull crimson. The variety differs from the species in having reddish peduncles, pedicels, and buds.

For previous introduction see No. 73448.

78111. SYRINGA SWEGINZOWII Koehne and Ling. Oleaceae. **Chengtu lilac.**

Variety *superba*. An attractive hardy lilac, about 10 feet high, native to western China. The dark-green, oval leaves are 2 to 4 inches long, and the fragrant, rosy lilac flowers are borne in June in terminal panicles up to 10 inches long.

For previous introduction see No. 63584.

78112 to 78160.

From Nancy, France. Plants purchased from V. Lemoine & Son. Received November 22, 1928.

78112. ABELIA GRAEBNERIANA Rehder. Caprifoliaceae.

A semideciduous shrub about 3 feet high, with oval or oval-oblong acuminate leaves 1 to 2 inches long, and bell-shaped flowers, an inch long, pink with yellow throats. Native to western China.

78113 to 78117. BERBERIS spp. Berberidaceae. **Barberry.**

78112 to 78160—Continued.

78113. BERBERIS AURICOMA Hort.

A hybrid between *Berberis vulgaris* and a choice variety of *B. thunbergii*, previously offered under the wrong name of *B. japonica flore luteo*. It is said to be a lovely shrub covered in the spring with a profusion of bright-yellow flowers.

78114. BERBERIS BREVIPANICULATA C. Schneid. **Short-cluster barberry.**

A deciduous species, native to western China, forming a dense erect bush with glaucous oblong leaves, graceful panicles, an inch long, of small pale-yellow flowers, and rosy red berries.

For previous introduction see No. 76556.

78115. BERBERIS GIRALDII Hesse.

A species with large deciduous bronze-red leaves, long drooping clusters of deep-yellow flowers, and compact bunches of scarlet berries. Native to north-central China.

For previous introduction see No. 66684.

78116. BERBERIS LEPTOCLADA Diels.

A low deciduous ornamental shrub of distinct glaucous coloring, with ellipsoid reddish berries. Native to China.

78117. BERBERIS sp.

Tengyueh. A species, as yet unidentified, collected near Tengyueh, Yunnan, China.

78118. CERCIS RACEMOSA Oliver. Caesalpiniaceae. **Redbud.**

A remarkable ornamental tree, native to China, with long pendulous racemes of silvery rose flowers.

78119 to 78121. CLEMATIS GRATA Wall. Ranunculaceae.

These hardy varieties were raised from seeds saved on *Clematis grata* (*Jouiniana*) without any artificial cross, and remind one much more of *Clematis davidiana* than of the plant from which they proceed. They have lost the character of climbers. The flowers, produced abundantly during September, are of a more or less vivid blue.

78119. *Campanile.* A handsome variety with tall panicles of hyacinth-shaped light azure-blue flowers.

78120. *Côte d'Azur.* A variety with glossy foliage, as in *Clematis tubulosa*, and panicles of deep azure-blue flowers produced in the form of small pyramids along all the branches.

78121. *Oiseau bleu.* A variety with small foliage. The upper part of the clump is covered with very light and elegant dichotomous panicles of flowers, azure lilac fading to pale pink lilac, which open in the shape of hyacinths, then take a starlike form.

78122 to 78141. DEUTZIA spp. Hydrangeaceae.

78122. DEUTZIA TAIWANENSIS (Maxim.) C. Schneid.

An attractive deciduous shrub, with slender branches, native to the moun-

78112 to 78160—Continued.

tains of Taiwan. The white or pinkish-white flowers, with conspicuous golden-yellow stamens, are in graceful racemes.

For previous introduction see No. 62707.

78123. DEUTZIA sp.

Crenata eburnea. A variety raised from *Deutzia crenata candidissima plena* crossed by *D. vilmorinae,* with graceful clusters of single white flowers.

78124. DEUTZIA sp.

Crenata eminens. A variety with tall erect branches, dark-green foliage, and large pyramidal panicles of handsome flowers with reflexed, glistening white petals.

78125. DEUTZIA sp.

Crenata erecta. A variety raised from *Deutzia crenata candidissima plena* crossed by *D. vilmorinae,* with upright branches and handsome pyramidal clusters of large single milk-white flowers.

78126. DEUTZIA sp.

Crenata formosa. A variety with large full double white flowers which have wrinkled and reflexed petals.

78127. DEUTZIA sp.

Crenata gracillima. A variety with loose panicles of large flowers which have slightly fringed white petals and pale-yellow anthers.

78128. DEUTZIA sp.

Crenata latiflora. The upright panicles contain 18 to 20 single white flowers which are 1½ inches in diameter.

78129. DEUTZIA sp.

Crenata longipetala. A hybrid of second generation from *Deutzia crenata* and *D. vilmorinae.* Its habit seems to indicate a possible consanguinity with *D. gracilis.* It forms a tuft of erect stems, with narrow leaves and crowded panicles of large flowers which have five long fringed pure-white petals.

78130. DEUTZIA sp.

Crenata magnifica. A variety with an abundance of handsome pure-white well-expanded flowers.

78131. DEUTZIA sp.

Crenata mirabilis. A hybrid of second generation from *Deutzia crenata* and *D. vilmorinae.* It is of very vigorous growth, with pure milk-white upright flowers, of the largest size, borne in enormous pyramidal panicles on long branches.

78132. DEUTZIA sp.

Crenata staphyleoides. A variety with large white flowers of unusual breadth, which remind one of the blossoms of Staphylea.

78133. DEUTZIA sp.

Crenata suspensa. The numerous white flowers, with reflexed petals, are borne on long drooping sprays and completely hide the foliage.

78112 to 78160—Continued.

78134. DEUTZIA sp.

Discolor arcuta. A hybrid between *Deutzia scabra* and *D. purpurascens.* The well-expanded pure-white flowers are borne on long arched branches.

78135. DEUTZIA sp.

Discolor candida. A cross between *Deutzia scabra* and a hybrid of *D. lemoinei,* bearing an abundance of large snow-white paniculate flowers.

78136. DEUTZIA sp.

Discolor conspicua. A hybrid between *Deutzia sieboldiana* and *D. purpurascens,* forming a clump of long arched branches with short corymbs of very pale-pink buds which change to a lustrous white when they open into well-expanded flowers.

78137. DEUTZIA sp.

Discolor fasciculata. A hybrid between *Deutzia scabra* and *D. purpurascens.* It makes a rounded bush bearing pale-pink flowers, with a crown of yellow stamens, on long arched branches.

78138. DEUTZIA sp.

Contraste. A superb variety raised from a cross of *Deutzia longifolia purpurea,* bearing beautiful panicles of large flowers with reflexed slightly fringed mauve-pink petals with a median purple streak on the outside.

78139. DEUTZIA sp.

Mont-Rose. A handsome novelty raised by crossing a pink form of *Deutzia longifolia* with *D. discolor purpurascens.* It forms a very graceful bush with large trusses of well-expanded mauve-pink flowers.

78140. DEUTZIA sp.

Magicien. A most showy variety likewise raised from a cross of *Deutzia longifolia,* with panicles of very large flowers whose waved and fringed petals are mauve pink, edged with white, and purplish underneath.

78141. DEUTZIA sp.

Longifolia purpurea. A tall form with deep-pink flowers.

78142. DIERVILLA sp. Caprifoliaceae. Weigela.

Féerie. A shrub bearing an abundance of upright trusses of large self rose-pink flowers, during the middle of May, which completely hide the foliage.

78143. DIERVILLA sp. Caprifoliaceae. Weigela.

Idéal. A beautiful shrub bearing, during May, erect or horizontal panicles of medium-sized flowers which are carmine rose with bright carmine on the outside.

78144 to 78146. ILEX spp. Aquifoliaceae. Holly.

78144. ILEX FARGESII Franch.

A shrub with black bark, dull-green, narrowly oblong spiny evergreen leaves about 5 inches long, and globose red berries in small axillary clusters.

For previous introduction see No. 62723.

78112 to 78160—Continued.

78145. ILEX PERNYI VEITCHII (Veitch) Rehder.

A large-leaved form of *Ilex pernyi*, which is an evergreen shrub or small tree native to China, with crowded oval-rhombic spiny leaves, pale-yellow flowers, and red berries in dense sessile clusters.

78146. ILEX WILSONII Loes.

An ornamental evergreen shrub with broad spiny glistening green leaves. Native to China.

78147. LONICERA PILEATA YUNNANENSIS (Franch.) Rehder. Caprifoliaceae. **Honeysuckle.**

A prostrate half-evergreen shrub with small boxlike foliage, inconspicuous yellow flowers, and clusters of dainty but not prominent violet berries. Native to southwestern China.

For previous introduction see No. 76584.

78148. LOROPETALUM CHINENSE (R. Br.) Oliver. Hamamelidaceae.

A somewhat tender, beautiful bushy evergreen shrub, native to China, about 5 feet high, with wiry hairy branches oval unsymmetrical leaves, and curious white witch-hazellike flowers during the early spring.

For previous introduction see No. 46424.

78149 to 78154. PHILADELPHUS spp. Hydrangeaceae.

78149. PHILADELPHUS PEKINENSIS BRACHYBOTRYS Koehne.

An ornamental deciduous shrub with long branches, thin elliptic pointed leaves, and fragrant flowers. Native to China.

For previous introduction see No. 53719.

78150. PHILADELPHUS sp.

Amalthée. A vigorous variety with long lustrous leaves and large flowers which are slightly blotched with pale pink.

78151. PHILADELPHUS sp.

Atlas. A handsome tall-growing sort with enormous flowers, over 2½ inches wide, which have broad milk-white petals.

78152. PHILADELPHUS sp.

Belle Etoile. For previous introduction and description see No. 78088.

78153. PHILADELPHUS sp.

Enchantement. For previous introduction and description see No. 78092.

78154. PHILADELPHUS sp.

Innocence. A variety with such an abundance of large single pure-white flowers borne on long arched branches that the bush has the appearance of snowy sheaves of blooms.

78155. STYRAX HEMSLEYANA Diels. Styracaceae.

A handsome shrub or small tree, native to China, up to 20 feet high, with sharp-pointed obliquely oval leaves, and pure-white flowers nearly half an inch long, in racemes about 6 inches long.

78112 to 78160—Continued.

78156. STYRAX JAPONICUM Sieb. and Zucc. Styracaceae. **Japanese snowbell.**

Variety *Fargesii.* A handsome variety introduced from central China by the late Maurice de Vilmorin. It differs from the well-known type by its taller branches, more ample foliage, and larger pendulous flowers of a snowy whiteness.

78157 to 78160. SYRINGA spp. Oleaceae.

78157 and 78158. SYRINGA SWEGINZOWII Koehne and Ling. **Chengtu lilac.**

78157. A hardy ornamental shrub, native to China, about 10 feet high, with dark-green oval leaves 2 to 4 inches long, and terminal panicles, up to 10 inches long, of fragrant rosy lilac flowers which are borne during June.

For previous introduction see No. 63584.

78158. Variety *superba.*

For previous introduction and description see No. 78111.

78159. SYRINGA TOMENTELLA Bur. and Franch. (*S. adamiana* Balf. and Sm.). **Felted lilac.**

A recently introduced bushy shrub, similar to *Syringa wilsonii*, about 10 feet high, with elliptic leaves which are hairy beneath and long-branched spikes of fine mauve-pink flowers. This shrub is native to western China.

For previous introduction see No. 76276.

78160. SYRINGA WOLFI C. Schneid. **Lilac.**

An ornamental shrub recently introduced from Chosen. It is remarkable for its peculiar foliage and for its much-branched panicles of dark lilac-purple flowers.

78161 and 78162.

From Burnham Thorpe, Kings Lynn, England. Plants presented by Rev. Henry Hibberd. Received November 24, 1928.

These plants are from the garden formerly owned by the father of Lord Nelson.

78161. LAVANDULA SPICA L. Menthaceae. **Lavender.**

78162. TAXUS BACCATA L. Taxaceae. **English yew.**

78163. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

A pineapple growing at the United States Plant Introduction Garden, Chapman Field, Coconut Grove, Fla. Numbered in December, 1928.

This pineapple is considered to be a natural hybrid between Smooth Cayenne and Red Spanish. The plant has many suckers, a multiple crown, and a long stem. The fruit appears to be of fair quality.

78164 to 78168.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received December 18, 1928.

78164. CASTANOPSIS CUSPIDATA (Thunb.) Schottky. Fagaceae. **Japanese chinquapin.**

Nos. 772 and 773. Collected in the National Forest, district of Miyakonojo

78164 to 78168—Continued.

Eirinsho, Miyazaki Ken, Kyushu, and sent by K. Okamura, November, 1928. *Itajii.* An evergreen chinquapin much used in Japan for hedges, for which it seems admirably suited. The acorns, although small, have a sweet taste when baked like chestnuts, and when boiled or roasted they are sold in Japan for food. This tree is not hardy in the northern United States.

For previous introduction see No. 34642.

78165 to 78168. QUERCUS spp. Fagaceae. **Oak.**

These seeds were collected in Osuzu National Forest, Kawakita, Tsuno Machi, Koyu Gun, Miyazaki Ken, and sent by Mimitsu Eirinsho, November, 1928.

78165. QUERCUS ACUTA Thunb.

No. 776. *Aka gashi* [red oak]. An evergreen oak, native to Japan.

78166. QUERCUS MYRSINAEFOLIA Blume.

No. 775. *Shira gashi* [white oak]. A handsome evergreen oak, which is native to Japan, 30 to 40 feet high, with lanceolate-serrate leaves, 3 to 5 inches long, smooth and shining above and covered with a whitish bloom underneath. The ovoid acorns, nearly an inch long and one-third covered by the smooth cup, are borne in short spikes.

For previous introduction see No. 74222.

78167. QUERCUS SESSILIFOLIA Blume.

No. 774. *Tsukubane gashi.* An oak, native to Japan, with leathery sessile lanceolate leaves 2 to 4 inches long.

78168. QUERCUS STENOPHYLLA (Blume) Makino.

No. 777. *Urajiro gashi.* An oak with narrowly lanceolate long-pointed leaves 2 to 6 inches long. It is native to Japan.

78169. EUPHORBIA INTISY Drake. Euphorbiaceae.

From Madagascar. Plants collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received in November, 1928.

North of Behara, on the road to Tranomaro, September, 1928. An arborescent succulent, about 12 feet high, native to southern Madagascar in regions of limited rainfall, occasional frost, and varied soil conditions. At one time it was the most important rubber plant of Madagascar, but it is now practically extinct commercially because of the lack of care used in harvesting the rubber. It has gray bark, dichotomous or somewhat whorled branches, and minute scattered leaves. The small inconspicuous greenish flowers are in very short cymes borne near the tips of the branches.

78170 to 78177.

From Berlin, Germany. Plants purchased from L. Späth. Received November 24, 1928.

78170. MALUS sp. Malaceae. **Apple.**

Oekonomierat Echter-meyer. An ornamental flowering variety.

78171 to 78177. PRUNUS spp. Amygdalaceae.

78170 to 78177—Continued.

78171. PRUNUS BALDSCHUANICA Regel.

A spreading shrub, native of Turkestan, closely resembling the flowering plum (*Prunus triloba*). The oblong or obovate leaves are acuminate, with rather large teeth.

78172. PRUNUS BLIREANA MOSERI Koehne.

A garden hybrid of the cherry plum with purple leaves and small light-pink flowers.

78173. PRUNUS CERASIFERA WOODII W. Wood (*P. cerasifera spaethiana* W. Wood).

A form of the cherry plum with leaves which remain dark purple all summer.

78174. PRUNUS CERASUS SEMPERFLORENS (Ehrh.) Koch. **All Saints cherry.**

A variety of the sour cherry which bears its flowers at the end of short leafy branchlets during the summer.

78175. PRUNUS FRUTICOSA PENDULA Dipp. **Weeping bush cherry.**

A form of the European bush cherry. It is a bushy shrub about 3 feet high with slender pendulous branchlets, dark glossy green oblong-elliptic leaves an inch long, single white flowers, and dark-red fruits in small umbels.

78176. PRUNUS JACQUEMONTII Hook. f.

A handsome Himalayan flowering shrub up to 12 feet high, with sharply serrate elliptic leaves 2 to 3 inches long, rose-colored flowers two-fifths of an inch across, and juicy red fruits.

78177. PRUNUS JAPONICA THUNBERGII Koehne.

A variety of *Prunus japonica* with cordate long-acuminate leaves having longer and more pointed teeth.

78178 to 78182.

From Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received December 14, 1928.

78178. ACANTHOPANAX RICINIFOLIUM Seem. Araliaceae.

No. 779. Collected in the Teshio Second University Forest, Hokkaido Imperial University, and sent by Wasaku Ishio, Teshio Second University Forest, Hokkaido Imperial University, Toikanbetsu, Teshio Gun, Hokkaido, November, 1928. *Harigiri.* A tree up to 90 feet high, native to eastern Asia. The large round leaves, sometimes a foot across, are divided into five to seven triangular serrate lobes; the white flowers are in large terminal clusters and are followed by small black fruits.

For previous introduction see No. 39586.

78179 and 78180. PICEA GLEHNI (Schmidt) Masters. Pinaceae. **Saghalin spruce.**

A handsome evergreen tree, native to Japan, up to 120 feet high, with lustrous brown or violet cones.

For previous introduction see No. 75405.

78179. No. 781. *Aka ezomatsu.* Collected in the University Forest, near Toikanbetsu, and sent by Wasaku

78178 to 78182—Continued.

Ishio, Teshio Second University Forest, Hokkaido Imperial University, Toikanbetsu, Teshio Gun, Hokkaido, November, 1928.

78180. No. 782. *Aka ezomatsu.* Collected at Jozankei, near Sapporo, and sent by Otohiko Ito, Sapporo Hokkaido, November, 1928.

78181. PRUNUS SERRULATA SACHALINENSIS (Schmidt) Makino (*Prunus sargenti* Rehder). Amygdalaceae.

Sargent cherry.

No. 780. Collected in Maruyama, near Sapporo, Hokkaido, and sent by Otohiko Ito, November, 1928. *Ezoyamazakura.* A tall handsome tree, native to northern Japan, up to about 80 feet high, with smooth, dark-brown bark and ovate or ovate-lanceolate, sharply serrate leaves. The single pink flowers are in few-flowered clusters, and the black fruits are about the size of peas. This wild Japanese cherry is considered by E. H. Wilson, Arnold Arboretum, Jamaica Plain, Mass., to be the parent of several of the finest double-flowering varieties of flowering cherries and also to be the most satisfactory stock on which to work these varieties.

For previous introduction see No. 77652.

78182. PTEROCARYA SORBIFOLIA Sieb. and Zucc. Juglandaceae. **Wingnut.**

No. 778. Collected in the National Forest in the Hamamachi Eirinsho district, and sent by Yoshikiyo Sugita, director of the Hamamachi Eirinsho, Kyoshu, Kumamoto Ken, November, 1928. *Nobu no ki.* A tree, native to Japan, nearly 100 feet high, with large compound leaves and long racemes of winged fruits.

For previous introduction see No. 75686.

78183. PHAJUS TANKERVILLIAE (Ait.) Blume. Orchidaceae.

From Takengon, Sumatra. Rhizomes collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May 14, 1926. Numbered in October, 1928.

No. 459. March 1, 1926. A vigorous orchid with rather coarse, erect leaves and stalks 30 to 36 inches high, bearing 14 to 18 flowers about 2½ inches in diameter. The petals are creamy white, more or less flushed with bronze. The lip is deeply flushed with bronze and with purple on the inner surface. The flowers are not fragrant.

78184 to 78236.

From Grahamstown, South Africa. Plants obtained from W. and C. Gowie, through Hugh Evans, Santa Monica, Calif. Received in November, 1928.

78184 to 78187. ALOE spp. Liliaceae.

78184. ALOE CILIARIS Haworth.

A fleshy plant, native to South Africa, with stems many yards long, terete branches, thick linear leaves 6 inches long, and lax racemes of bright-red flowers.

78185. ALOE MYRIACANTHA (Haw.) Roem. and Schult.

A fleshy plant with a rosette of 10 to 12 linear leaves, 6 inches long,

78184 to 78236—Continued.

mottled with white spots, and a dense cluster of curved tubular flowers on a stem a foot high. Native to South Africa.

78186. ALOE TENUIOR Haw.

A creeping succulent vine, native to South Africa, with terete branches striped with green, linear leaves 8 inches long, and racemes of pale-yellow flowers.

78187. ALOE VARIEGATA L.

A perennial, native to South Africa, with a leafy stem 6 to 9 inches high. The triangular ascending leaves, 2 to 5 inches long in three close oblique ranks, are green crossed by bands of elongated white blotches and have white, scarcely serrate margins. The flowering stem is about a foot high, bearing a raceme of red tubular flowers 1 to 2 inches long.

For previous introduction see No. 77219.

78188. ANACAMPSEROS TELEPHIASTRUM DC. Portulacaceae.

A succulent plant, native to South Africa, a few inches high, with thick orbicular leaves and panicles of reddish flowers.

78189. APICRA DELTOIDEA Baker. Liliaceae.

A succulent, a foot high, with thick deltoid leaves an inch long which are bright shining green without spots or tubercles, and lax racemes of whitish flowers. Native to South Africa.

78190. CARALLUMA LUTEA N. E. Brown. Asclepiadaceae.

A dwarf leafless succulent, native to South Africa, with crowded purple-mottled green stems 4 inches long, sharply four angled, and armed with stout horizontal teeth nearly half an inch long. The yellow flowers, in a cluster of 20 to 25, are 2 to 3 inches broad, and most of them open at the same time.

78191 to 78196. COTYLEDON spp. Crassulaceae.

78191. COTYLEDON CRISTATA Haw.

A nearly stemless succulent with petiolate cuneate leaves an inch long, and a stem, 8 inches high, about half of which bears tubular flowers. Native to South Africa.

78192. COTYLEDON GRACILIS Harvey.

A dwarf plant, 4 to 6 inches high, native to South Africa, with slender stems, spatulate leaves 1 to 2 inches long, and opposite terminal panicles of tubular flowers.

78193 and 78194. COTYLEDON ORBICULATA L.

A succulent plant up to 4 feet high, with opposite nearly circular mealy leaves which have red margins and panicles of large reddish flowers. Native to South Africa.

78193. No. 1. **78194.** No. 2.

78195. COTYLEDON sp.

A succulent plant, native to South Africa, with usually fleshy leaves and reddish or yellowish flowers.

78184 to 78236—Continued.

78196. COTYLEDON sp.

A succulent plant, native to South Africa.

78197 to 78201. CRASSULA spp. Crassulaceae.

78197. CRASSULA FALCATA Willd.

A shrubby robust densely leafy succulent native to South Africa. The thick glaucous obliquely sword-shaped leaves, 3 to 4 inches long, are united at the base. The lower ones are reflexed and decrease in size upwards. The stem and leaves are finely granulated, giving the plant a frosted appearance. The bright crimson or rarely white flowers are in a much-branched panicle.

78198. CRASSULA PERFOLIATA L.

A shrubby succulent native to South Africa with thick glaucous connate leaves and cymes of bright-crimson flowers.

78199. CRASSULA ROSULARIS Haw.

A herbaceous succulent plant with radical strap-shaped leaves 3 to 5 inches long and scapelike peduncles a foot high, with cymes of small white flowers. Native to South Africa.

78200. CRASSULA sp.

A succulent plant, native to South Africa, with more or less fleshy leaves and white or red flowers.

78201. CRASSULA sp.

A succulent, native to South Africa.

78202. CYANASTRUM CORDIFOLIUM Oliver (*Schoenlandia gabonensis* Cornu). Haemodoraceae.

A bulbous perennial, native to West Africa, with membranous cordate leaves 6 inches long, rising singly from the corymb, and blue flowers half an inch long in a bracted lax raceme.

78203. DUVALIA RECLINATA Haw. Asclepiadaceae.

A succulent leafless plant a foot long, with 4-angled to 5-angled stems, the angles being tuberculate toothed, and small clusters of chocolate-colored flowers. Native to South Africa.

78204 to 78209. GASTERIA spp. Liliaceae.

78204. GASTERIA BREVIFOLIA Haw.

A succulent herb, native to South Africa, with a very short leafy stem densely crowded with oblong glossy leaves 4 inches long and racemes of tubular red flowers an inch long.

78205. GASTERIA CROUCHERI (Hook f.) Baker (*G. natalensis* Baker).

A succulent, native to South Africa, with a short stem 1 to 2 inches long and a rosette of 12 to 18 lanceolate leaves 15 inches long, 3 inches broad, and an inch thick at the base, narrowed to a sharp point and marked with small greenish white spots.

78206. GASTERIA NITIDA (Salm-Dyck) Haw.

A succulent, native to South Africa, with a short stem, a rosette of thick fleshy lanceolate leaves 9 inches long, bright green with small white spots.

78184 to 78236—Continued.

and a peduncle a foot long bearing a lax raceme of red, white, and green flowers.

78207. GASTERIA sp.

A succulent herb, native to South Africa, with a rosette of strap-shaped leaves and lax racemes of usually red flowers.

78208. GASTERIA sp.

A succulent, native to South Africa.

78209. GASTERIA sp.

A succulent, native to South Africa.

78210 to 78217. HAWORTHIA spp. Liliaceae.

78210. HAWORTHIA ARACHNOIDES (Mill.) Haw.

A succulent, native to South Africa, with a very short stem and rosettes 3 to 4 inches across, of 30 to 40 thick lanceolate leaves, 2 inches long, having a long transparent awn and transparent teeth along the edges and keel.

78211. HAWORTHIA CYMBIFORMIS Haw.

A succulent with rosettes 3 to 4 inches broad, of 20 to 25 obovate leaves 2 inches long, pale green marked on the upper half with vertical lines of darker green. Native to South Africa.

78212. HAWORTHIA FASCIATA (Willd.) Haw.

A succulent, native to South Africa, with a short leafy stem forming a spiral rosette of ascending deltoid-lanceolate leaves having transverse bands of white tubercles. The rosy lined flowers are in a terminal raceme less than a foot high.

78213. HAWORTHIA REINWARDTI (Salm-Dyck) Haw.

A stoloniferous succulent, native to South Africa, with a leafy stem 6 inches high and 2 inches in diameter including the leaves. These are ascending, ovate-lanceolate, pale green when young, but turning reddish brown with age and having 9 to 11 vertical rows of raised white tubercles.

78214. HAWORTHIA TRANSLUCENS (Willd.) Haw.

A succulent, native to South Africa, with a rosette of ascending lanceolate pale-green leaves, 2 inches long, having a long transparent awn at the tip and margined with deltoid transparent teeth.

78215. HAWORTHIA sp.

A succulent, native to South Africa.

78216. HAWORTHIA sp.

A succulent, native to South Africa.

78217. HAWORTHIA sp.

A succulent, native to South Africa.

78218. HEURNIA sp. Asclepiadaceae.

A succulent, native to South Africa.

78219. HEURNIA sp. Asclepiadaceae.

A succulent, native to South Africa.

78220. ARGETA PETRENSIS N. E. Brown. Aizoaceae.

78184 to 78236—Continued.

A very dwarf stemless perennial which forms clumps of buttonlike growths, each one of which consists of two adpressed succulent leaves, surrounded and partly covered by the scarious vestiges of former leaves. Between them push up the solitary rosy asterlike flowers, nearly an inch in diameter. Native to South Africa.

78221. CONOPHYTUM WIGGETAE N. E. Brown. Aizoaceae.

A very small buttonlike perennial, succulent, native to South Africa, about one-third of an inch high and half an inch broad, elliptic to circular in outline, dull green, thickly marked with blackish dots, covered and surrounded by dry vestiges of leafstalks. The solitary flower pushes up through the central portion of the body.

78222. CONOPHYTUM sp. Aizoaceae.

One of the dwarf buttonlike conophytums, smaller in all dimensions than *Conophytum wiggetae* [No. 78221].

78223. GLOTTIPHYLLUM ARRECTUM N. E. Brown. Aizoaceae.

A low succulent with ascending light-green nearly cylindrical leaves 2 to 3 inches long, in pairs, the pairs set obliquely to one another. The bright-yellow flowers, 2 to 3 inches across, are nearly sessile and without odor. Native to South Africa.

78224. HERERoA TUGWELLIAE L. Bolus. Aizoaceae.

A low succulent plant, native to arid places in Cape Province, South Africa. It forms irregular rosettes about 4 inches across and nearly as high. The gray-green irregularly shaped leaves are variously molded for mutual accommodation, and the yellow asterlike flowers are about an inch wide.

78225. MENTOCALYX MUIRII N. E. Brown. Aizoaceae.

A stemless perennial succulent consisting usually of only one pair of opposite, unequal leaves. When young, these are erect and pressed together like an eagle's beak; when older they are spreading, thick and flat, and the larger is about 2 inches long. The solitary pure-white flower, 2 inches across, is borne in front of the leaves. Native to South Africa.

78226. FAUCARIA TIGRINA (Haw.) Schwantes. Aizoaceae.

A dwarf succulent forming close-tufted rosettes of short stems not over 6 inches high. The thick opposite leaves are crowded and are conspicuous for the flexible spines along the margins, giving the effect of open jaws noted in the name. The solitary yellow daisylike flowers are about 1½ inches across.

78227. RIMARIA HEATHII N. E. Brown. Aizoaceae.

A stemless succulent perennial, native to arid regions in South Africa, which forms a compressed-ovoid growth up to 2 inches in diameter and about an inch high, surrounded and partly covered by the remainder of former leaves. The solitary white daisylike flower is about 1½ inches across.

78228. SENECIO RADICANS (L. f.) Schultz Bip. (*Kleinia radicans* Haw.). Asteraceae.

78184 to 78236—Continued.

A succulent with creeping wing-angled stems 2 feet long, short erect branches, fleshy lanceolate leaves an inch long, and rayless flower heads. The leaves have a taste of turpentine and are eaten by the natives. Native to South Africa.

78229. STAPELIA sp. Asclepiadaceae.

A dwarf perennial succulent, native to South Africa.

78230. STAPELIA sp. Asclepiadaceae.

A dwarf perennial succulent, native to South Africa.

78231. STRELITZIA ALBA (L. f.) Skeels (*S. augusta* Travenf.). Musaceae.

A plant native to South Africa with woody stems up to 18 feet high, a cluster of oblong leaves 3 feet long, on petioles 6 feet long, at the summit of the stem, and pure-white flowers protruding from a purple spathe.

For previous introduction see No. 31860.

78232. STRELITZIA REGINAE Banks. Musaceae. **Bird-of-paradise flower.**

A plant, native to South Africa, with a creeping rhizome from which grow the bananalike leaves with petioles 4 feet long and lanceolate blades 2 feet long. The flowers are borne on a stalk 3 to 4 feet high and grow out from the margin of a purple-edged bright-green bract 8 inches long. The orange-yellow lanceolate sepals are 3 to 4 inches long, and the dark-blue arrow-shaped petals are 3 inches long.

For previous introduction see No. 76788.

78233. (Undetermined.)

78234. (Undetermined.)

78235. (Undetermined.)

78236. (Undetermined.)

78237 to 78239. RHODODENDRON spp. Ericaceae. **Azalea.**

From Tunbridge Wells, England. Plants purchased from R. Wallace & Co. Received December 7, 1928.

78237. RHODODENDRON sp.

Amoena pulchella.

78238. RHODODENDRON sp.

Spectabilis rosea.

78239. RHODODENDRON sp.

Sublanceolata.

78240. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

From Johannesburg, South Africa. Cuttings presented by John Bell & Co. Received December 8, 1928.

A variety which is sweeter and contains more juice than the tangerine.

78241 to 78243. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Russia. Seeds presented by Prof. J. A. Mirtoff, Director of the Russian Bureau of Agricultural Information in

78241 to 78243—Continued.

America, New York, N. Y., through W. J. Morse, Bureau of Plant Industry. Received December 20, 1928.

Varieties grown at the Ekaterinoslav Experiment Station.

78241. No. 57. 78243. No. 61.

78242. No. 59.

78244. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

From Guaymas, Sonora, Mexico. Seeds obtained from H. S. Bursley, American consul, Guaymas, through Henry C. A. Damm, American consul, Nogales, Sonora. Received December 20, 1928.

A close relative of the kapok tree (*Ceiba pentandra*), said to be a large or medium-sized tree with a greenish spiny trunk, compound leaves, and hard oblong fruits about 7 inches long, which contain whitish down used for stuffing pillows, life preservers, and for making candlewicks. It is native to western and southern Mexico.

For previous introduction see No. 76014.

78245 to 78254.

From Ukrainia, Russia. Seeds presented by the Ekaterinoslav Experiment Station, through Prof. J. A. Mirtoff, director of the Russian Bureau of Agricultural Information, New York, N. Y. Received December 20, 1928.

78245 to 78248. HORDEUM spp. Poaceae.

78245. HORDEUM DISTICHON NUDUM L. **Two-rowed barley.**

No. 0155.

78246 and 78247. HORDEUM VULGARE PALLIDUM Seringe. **Six-rowed barley.**

78246. No. 2. *Grushevsky.*

78247. No. T–45.

78248. HORDEUM DISTICHON PALMELLA Harlan. **Two-rowed barley.**

No. 0254.

78249 to 78252. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

78249. No. 040. Winter wheat.

78250. No. 058. Spring wheat.

78251. No. 065. Winter wheat.

78252. No. 071. Spring wheat.

78253 and 78254. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

78253. No. 037. 78254. No. 05.

78255. VOANDZEIA SUBTERRANEA (L.) Thouars. Fabaceae.

From Kinda, Lulua, Katanga, Belgian Congo, Africa. Seeds presented by R. L. Smalley. Received December 21, 1928.

Nimu ya bukola. An erect variety about 9 inches high, with flowers which push into the ground, the fruits developing there close to the plant. It is planted about November and harvested during April. About 3 per cent have two seeds in a pod, and one plant yields between 30 and 40 pods. In Northern Rhodesia this variety is called "Grant's peanuts."

78256 to 78260.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson, American Board Mission in South Africa. Received December 26, 1928.

78256. DIOSPYROS SENEGALENSIS Perr. Diospyraceae. **Persimmon.**

A shrub or small tree, native to tropical Africa, with small edible fruits up to an inch in diameter, said to be of good flavor and sometimes called "monkey guavas."

For previous introduction see No. 70941.

78257. KHAYA NYASICA Stapf. Meliaceae.

The red mahogany is one of the most valuable timber trees of Rhodesia and is widely distributed over Mozambique. It is fairly rapid in growth, though not equal to some of the eucalypts in this respect. It is found most often growing near streams, and also occurs on high ground at a distance from water. The timber is very durable and is not attacked by white ants or borers.

For previous introduction see No. 59293.

78258. LOVOA SWYNNERTONII Baker f. Meliaceae.

For previous introduction and description see No. 77987.

78259. PARINARI CURTELLAEFOLIUM Planch. Rosaceae.

Sand apple. A small or medium-sized tree with elliptic-oblong, scabrid leaves, glabrescent above and tomentose beneath, which are 2 to 5 inches long. The tomentose flower panicles are 3 to 6 inches long. The drupe, about the size of an ordinary plum, has a mealy, not unpleasant taste.

For previous introduction see No. 52808.

78260. PTEROCARPUS ANGOLENSIS DC. Fabaceae.

Bloodwood. An unarmed tree, native to the western part of central Africa, with alternate, unequally pinnate leaves, axillary or terminal racemes of flowers, and flat, 1-seeded almost round pods. The reddish wood is used in dyeing, and the bark contains a large quantity of tannin.

For previous introduction see No. 50178.

78261. FICUS VOLKENSII Warb. Moraceae. **Fig.**

From Amani, Tanganyika Territory, Africa. Seeds presented by K. E. Toms, superintendent of plantations, East African Agricultural Research Station. Received December 27, 1928.

A shrub or small tree, native to tropical Africa, with narrow papery dull-green leaves and axillary fruits half an inch long. It is reported to yield the best bark cloth known in Uganda.

78262. ARRACACIA XANTHORRHIZA Bancroft (*A. esculenta* DC.). Apiaceae. **Arracacha.**

78262—Continued.

From Mayaguez, Porto Rico. Tubers presented by T. B. McClelland, Porto Rico Agricultural Experiment Station. Received December 27, 1928.

A perennial, herbaceous plant closely related to the carrot. It grows about 3 feet high, with carrotlike foliage and small umbels of purple flowers. The large, fleshy roots are important food in parts of South America and Central America. They are eaten boiled like parsnips, or sliced raw and fried. Propagation is effected by making cuttings of the crown with a small piece of the root attached.

For previous introduction see No. 63580.

78263. ZEA MAYS L. Poaceae. **Corn.**

From Kinda, Lulua, Katanga, Belgian Congo, Africa. Seeds presented by R. L. Smalley. Received December 21, 1928.

A variety of corn with a harsh cob and grain which shells very easily. It is said to remain green a long time. There are occasionally a few black grains present. The natives recognize this as a distinct variety, but they plant it and use it as their other corn.

78264 to 78311. CLEMATIS spp. Ranunculaceae.

From Woking, Surrey, England. Plants purchased from George Jackman & Son, Woking Nurseries. Received December 27, 1928.

A collection of garden varieties of clematis.

78264. CLEMATIS sp.

Admiration. A climbing subshrubby variety bearing, between July and October, beautiful flowers which are deep salmon, edged with violet, shading off to a violet heliotrope, and white on the reverse side.

78265. CLEMATIS sp.

Ascotiensis. A climbing variety with large azure-blue flowers borne during June and July.

78266. CLEMATIS sp.

Belle of Woking. A climbing variety with fine large double silvery gray flowers borne during June.

78267. CLEMATIS sp.

Blue Gem. A very choice climbing variety with large pale sky-blue flowers borne between July and October.

78268. CLEMATIS sp.

Coerulea odorata. An evergreen climbing variety with small reddish-violet flowers borne between July and October.

78269. CLEMATIS sp.

Comtesse de Bouchaud. A climbing variety with large beautiful satiny rose flowers borne between July and October.

78270. CLEMATIS sp.

Countess of Lovelace. A climbing variety with large double bluish-lilac rosette-shaped flowers borne during June and July.

78271. CLEMATIS sp.

Countess of Onslow. A climbing subshrubby variety bearing, between July and October, bright violet-purple flowers with a broad band of scarlet down the center of each petal.

78272. CLEMATIS sp.

Crimson King. A free-growing variety bearing, between July and October, beautiful bright-red flowers, shading off paler down the center of each sepal, with chocolate-colored stamens.

78273. CLEMATIS sp.

Duchess of Albany. A climbing subshrubby variety bearing, between July and October, delicate pale blush-pink flowers with a deeper tinge down the center of each petal.

78274. CLEMATIS sp.

Duchess of Edinburgh. A climbing variety bearing large deliciously scented flowers during June and July. This is the best of the varieties bearing double pure-white flowers.

78275. CLEMATIS sp.

Duchess of Sutherland. A free-blooming variety bearing, between July and October, bright-red flowers shading off lighter down the center of the sepals.

78276. CLEMATIS sp.

Duchess of York. A climbing subshrubby variety bearing, between July and October, delicate pale blush-pink flowers with a deeper tinge down the center of each petal.

78277. CLEMATIS sp.

Duke of Edinburgh. A climbing variety bearing large violet-purple flowers between July and October.

78278. CLEMATIS sp.

Duke of Portland. A vigorous variety bearing, between July and October, lovely pale flesh-colored flowers with a crimson bar down the center of each sepal.

78279. CLEMATIS sp.

Empress of India. A variety bearing, between July and October, fine flowers which are light purple-violet with brown stamens and a deep-purple bar down the center of each sepal.

78280. CLEMATIS sp.

Fair Rosamond. A climbing variety bearing, during May and June, large blush-white flowers with an indistinct wine-red bar.

78281. CLEMATIS sp.

Fairy Queen. A climbing variety bearing, between July and October, large pale flesh-colored flowers with a striking pink bar.

78282. CLEMATIS sp.

Flammula rosea purpurea. A climbing variety bearing between July and October, an abundance of small rosy purple sweet-scented flowers.

78283. CLEMATIS sp.

Grace Darling. A climbing subshrubby variety bearing, between July and October, an abundance of medium-sized, star-shaped, bright rosy carmine flowers.

78264 to 78311—Continued.

78284. CLEMATIS sp.

Jackmanni. A climbing variety bearing, between July and October, an abundance of violet-purple flowers which are usually large.

78285. CLEMATIS sp.

Jackmanni superba. A climbing variety bearing, between July and October, many large flowers which are very dark violet purple.

78286. CLEMATIS sp.

King Edward VII. A climbing variety bearing, between July and October, large puce-violet flowers with a crimson bar down the center of each sepal.

78287. CLEMATIS sp.

King George V. A vigorous variety bearing, between July and October, beautiful light flesh-colored flowers with a bright-pink bar down the center of each sepal.

78288. CLEMATIS sp.

King of the Belgians. A climbing variety bearing, during May and June, large light-mauve flowers with a deep-mauve bar.

78289. CLEMATIS sp.

Lady Betty Balfour. A strong-growing climbing variety bearing, between August and October, an abundance of large deep velvety purple flowers.

78290. CLEMATIS sp.

Lady Caroline Neville. A climbing variety bearing, between July and October, large French-white flowers with mauve bars.

78291. CLEMATIS sp.

Lady Northcliffe. A climbing variety bearing, between July and October, large beautiful deep lavender-tinted bright-blue flowers with a purple base and white stamens.

78292. CLEMATIS sp.

Lasurstern. A climbing variety bearing large deep purplish-blue flowers between May and July.

78293. CLEMATIS sp.

Lord Neville. A climbing variety bearing large rich dark plum-colored flowers between July and October.

78294. CLEMATIS sp.

Marcel Moser. A climbing variety bearing, between July and October, large beautiful mauve-violet flowers with attractive red bars.

78295. CLEMATIS sp.

Miss Bateman. A climbing variety bearing, between May and July, large white flowers with chocolate-covered bars and red anthers.

78296. CLEMATIS sp.

Mrs. Bush. A climbing variety with large deep-lavender flowers borne between July and October.

78297. CLEMATIS sp.

Mrs. Cholmondeley. A climbing variety with large light-blue flowers borne between July and October.

78264 to 78311—Continued.

78298. CLEMATIS sp.

Mrs. George Jackman. A climbing variety bearing, during May and June, satiny white flowers with creamy bars.

78299. CLEMATIS sp.

Mrs. Hope. A climbing variety bearing, between June and October, satiny mauve flowers with darker tinted bars.

78300. CLEMATIS sp.

Mrs. Spencer Castle. A climbing variety with an abundance of beautiful pale-pinkish heliotrope, prettily veined flowers, which are borne between July and October.

78301. CLEMATIS sp.

Nellie Moser. A climbing variety bearing, between July and October, large light-mauve flowers which have bright-red bars.

78302. CLEMATIS sp.

Otto Froebel. A climbing variety bearing, between July and October, very large grayish-white flowers.

78303. CLEMATIS sp.

Queen Alexandra. A climbing variety bearing, between July and October, large pale-lavender flowers with lilac-purple base, shading off to a silvery white down the center.

78304. CLEMATIS sp.

Robert Hanbury. A climbing variety bearing, between June and October, large bluish-lilac flowers flushed at the edge with red.

78305. CLEMATIS sp.

Sir Garnet Wolseley. A climbing variety bearing, during May and June, large flowers which have a bluish ground with an effective dash of bronze, and distinct bars of plum red.

78306. CLEMATIS sp.

Star of India. A climbing variety bearing, between July and October, an abundance of large reddish plum-colored flowers with red bars.

78307. CLEMATIS sp.

The Bride. An exceptionally free-flowering variety bearing, between July and October, fine pure-white flowers with yellow stamens.

78308. CLEMATIS sp.

Velutina purpurea. A climbing variety bearing, between July and October, an abundance of large blackish-mulberry flowers.

78309. CLEMATIS sp.

Viticella alba luxurians. A climbing variety bearing, between July and September, an abundance of large white flowers.

78310. CLEMATIS sp.

W. E. Gladstone. A climbing variety bearing, between July and October, large flowers which are a beautiful lilac and a lighter shade down the center.

78311. CLEMATIS sp.

William Kennett. A climbing variety bearing, between July and October, large deep-lavender flowers.

78312 to 78321.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received December 27, 1928.

78312 to 78316. CASTANOPSIS spp. Fagaceae.

78312. CASTANOPSIS CUSPIDATA (Thunb.) Schottky. **Japanese chinquapin.**

Nos. 783 and 784. Collected in the Takano National Forest, Takaiyama Mura, Kimotsuke Gun, Kagoshima Ken, and received by Kanoya Eirinsho, Kimotsuke Gun, Kagoshima Ken, November, 1928.

For previous introduction and description see No. 78164.

78313 and 78314. CASTANOPSIS KAWAKAMII Hayata.

Collected at the Rengechi Forest Experiment Station, Taichu Province, Taiwan, at an altitude between 3,000 and 4,000 feet, November, 1928. The Japanese name is Okuri kashi, and the Taiwanian (Chinese) name is Toahyokoratsu. A Japanese tree between 75 and 90 feet high.

78313. No. 789.

78314. No. 790. The same as No. 789 [No. 78313], but from a different lot of trees.

78315. CASTANOPSIS STELLATO-SPINA Hayata.

No. 791. Collected on Hiiranza, a mountain 15 miles northeast of Kochun, near the southern end of Takao Province, November, 1928. *Togekuri kashi.* A Japanese evergreen tree.

78316. CASTANOPSIS TAIWANIANA Hayata.

No. 788. Collected at the Rengechi Forest Experiment Station, Taichu Province, Taiwan, at an altitude between 3,000 and 4,000 feet, November, 1928. The Japanese name is kuri kashi, and the Taiwanian (Chinese) name is chako.

78317. FAGUS JAPONICA Maxim. Fagaceae. **Japanese beech.**

No. 792. Collected by Seisho Nakayama in the Tokyo University Chichibu Forest, Chichibu Kyokuiku, Saitama Ken, November, 1928. *Inu buna.* A Japanese tree up to 75 feet high, usually dividing at the base into several trunks. The ovate pointed leaves are 2 to 4 inches long, with slightly sinuate or entire margins, and the triangular nuts are one-fourth to three-fourths of an inch long.

78318. FAGUS SIEBOLDII Endl. Fagaceae. **Siebold's beech.**

No. 793. Collected by Seisho Nakayama in the Tokyo University Chichibu Forest, Chichibu Kyokuku, Saitama Ken, November, 1928. *Buna.* A tree, native to Japan, 90 feet high, with rhombic-ovate leaves, 2 to 4 inches long, having shallowly crenate margins.

78319 to 78321. QUERCUS spp. Fagaceae. **Oak.**

78319. QUERCUS GILVA Blume.

No. 787. Collected in the Nagao National Forest, Yamada Mura, Kitamuro Gun, Miyazaki Ken, and received from Miyakonojo Eirinsho, Kyushu, Miyazaki Ken, November, 1928. *Ichiigashi.*

78320. QUERCUS SESSILIFOLIA Blume.

No. 785. Collected in the Nagao National Forest, Yamada Mura, Kitamuro Gun, Miyazaki Ken, and received from Miyakonojo Eirinsho, Kyushu Miyazaki Ken, November, 1928. *Tsukubane gashi.*

For previous introduction and description see No. 78167.

78321. QUERCUS STENOPHYLLA (Blume) Makino.

No. 786. Collected in the Nagao National Forest, Yamada Mura, Kitamuro Gun, Miyazaki Ken, and received from Miyakonojo Eirinsho, Kyushu, Miyazaki Ken, November, 1928. *Urajirogashi.*

For previous introduction and description see No. 78168.

78322 and 78323. SPATHODEA spp. Bignoniaceae.

From Honolulu, Hawaii. Seeds presented by Harry Johnson, Johnson Water Gardens, Hynes, Calif. Received December 20, 1928.

These two varieties were collected by Otto Degener.

78322. SPATHODEA CAMPANULATA Beauv.

A tree, native to tropical Africa, up to 70 feet high, with dark-green pinnate leaves 1 to 2 feet long, and large panicles of scarlet flowers each 4 inches long. The unopened flowers contain a quantity of water, which has secured for it the name fountain tree in India, where it is cultivated as an ornamental shade tree. The whitish fluffy seeds fill a boat-shaped capsule which is 10 to 12 inches long.

For previous introduction see No. 53983.

78323. SPATHODEA NILOTICA Seem.

A shrubby tree up to 20 feet high, native to the northern part of tropical Africa. The leaves, which are opposite and composed of 9 to 15 leathery leaflets, are covered beneath with dense short hairs, and the scarlet flowers are in short terminal clusters. Both the leaves and flowers resemble those of *Spathodea campanulata.*

For previous introduction see No. 58467.

78324 to 78327. RUBUS spp. Rosaceae.

From Alnarp, Akarp, Sweden. Plants presented by Carl G. Dahl. Received December 3, 1928.

78324. RUBUS GLANDULOSUS Bellardi. **Blackberry.**

A blackberry for which a description is not available.

78325. RUBUS HORRIDUS Hartm.

A blackberry native to Sweden, with angular, very thorny stems, white flowers, and small black fruits.

78326 and 78327. RUBUS PLICATUS Weihe and Nees. **Blackberry.**

78326. From Karup, Denmark.

78327. From Sunne, Sweden.

78328 and 78329.

From Wellesley, Mass. Seeds presented by T. D. Hatfield, Hunnewell estate. Received December 28, 1928.

78328. CALLUNA VULGARIS (L.) Salisb. Ericaceae. Heather.

A low evergreen shrub, native to Europe, 1 to 2 feet high, with small ovate leaves and dense racemes, 6 to 10 inches long, of rosy pink bell-shaped flowers.

78329. RHODODENDRON DAVIDSONIANUM Rehd. and Wils. Ericaceae. Davidson rhododendron.

A shrub up to 10 feet high, native to western China, with semievergreen oblong leaves 1 to 3 inches long, glaucous beneath, and terminal and axillary clusters of pink flowers an inch across, somewhat resembling those of the nearly related *R. mucronulatum*.

78330. ALBIZZIA LEBBECK (L.) Benth. Mimosaceae. Lebbeck tree.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received December 29, 1928.

A tree, native to tropical Asia, with doubly compound leaves made up of obliquely oval leaflets, axillary globular heads of greenish-yellow flowers, and long flat pods.

For previous introduction see No. 51902.

78331. MUCUNA BENNETTI F. Muell. Fabaceae.

From Port Moresby, New Guinea. Seeds presented by L. P. B. Armit. Received December 29, 1928.

For previous introduction and description see No. 77959.

78332 to 78370.

From Chiddingford, Surrey, England. Plants purchased from V. N. Gauntlett & Co. Received November 22, 1928.

78332. BAUERA RUBIOIDES Andrews. Grossulariaceae.

An attractive evergreen heathlike shrub, native to Australia, 4 to 5 feet high, with pink flowers resembling those of Kalmia.

78333. BERBERIS PALLENS Franch. Berberidaceae. Barberry.

A strong-growing deciduous shrub, 5 to 6 feet high, with bright-red bark, arching branches, and black fruits, the foliage assuming gorgeous tints in autumn. Native to southwestern China.

78334. BERBERIS RUBROSTILLA Chittenden. Berberidaceae Barberry.

A hybrid shrub raised in the Royal Horticultural Society gardens. It has ovate spatulate spiny leaves and pendulous clusters of coral-red fruits which are produced in the autumn.

For previous introduction see No. 76340.

78335. CEANOTHUS sp. Rhamnaceae.

Carmine Gem. A new hardy variety bearing large trusses of lilac-carmine flowers. It thrives in well-drained rich soil and is often used for covering walls, buildings, etc.

78336. DESFONTAINEA SPINOSA Ruiz and Pav. Loganiaceae.

78332 to 78370—Continued.

A choice evergreen with hollylike foliage, bearing attractive trumpet-shaped, orange-scarlet, waxy flowers between July and October. It is of slow dense growth, but blooms in the young stage, and in time reaches a height of about 6 feet. It is generally hardy if given a sheltered position in half shade.

78337 to 78352. ESCALLONIA spp. Escalloniaceae.

78337. ESCALLONIA FLORIBUNDA H. B. K.

A distinct species bearing arching clusters of pure-white flowers between August and November. It is said to be hardy in seaside districts, and should be grown against a wall, where it forms a splendid evergreen covering.

78338. ESCALLONIA GLUTINOSA Phil.

A white-flowered variety of an evergreen shrub, native to Chile, with small sessile, thick, cuneate-lanceolate leaves about 7 inches long.

78339. ESCALLONIA LANGLEYENSIS Veitch.

A hardy shrub, 5 to 6 feet high, which has a graceful pendulous habit. It is covered with rich-red flowers during June and July, and is one of the finest of shrubs.

For previous introduction see No. 41962.

78340 and 78341. ESCALLONIA MACRANTHA Hook. and Arn.

78340. A shrub with deep shining green ornamental foliage and an abundance of rich-crimson trumpet-shaped flowers. It is used largely in seaside districts as a hedge plant, and also makes a fine wall plant.

78341. Variety *Ingramii*. A variety of erect habit, with an abundance of small bright-crimson flowers.

78342. ESCALLONIA ORGANENSIS Gardn.

A very rare species with glossy reddish foliage and beautiful coral-pink flowers in clusters resembling those of Bouvardia. It is suitable only for walls in mild localities.

78343. ESCALLONIA PTEROCLADON Hook.

A shrub of erect growth, 6 to 10 feet high, with white flowers borne on long spikes.

For previous introduction see No. 38759.

78344. ESCALLONIA PULVERULENTA (Ruiz and Pav.) Pers.

A shrub with silvery gray foliage and white flowers.

For previous introduction see No. 36122.

78345. ESCALLONIA PUNCTATA DC.

A very scarce shrub, 4 to 5 feet high, with neat evergreen foliage and bright-red flowers which are distinct from all others.

78346. ESCALLONIA RUBRA (Ruiz and Pav.) Pers.

A dwarf prostrate shrub, with foliage similar to that of *E. macrantha*, and large rosy red flowers.

78332 to 78370—Continued.

78347. ESCALLONIA VIRGATA (Ruiz and Pav.) Pers.

Variety *philippiana*. A hardy evergreen bush with an abundance of fragrant white flowers borne late in the summer.

78348. ESCALLONIA sp.

Donardensis. A shrub of erect growth, 5 to 6 feet high, bearing, between July and September, flowers of a pale blush color.

78349. ESCALLONIA sp.

Edinburgh. A beautiful shrub resembling *Escallonia langleyensis* in habit of growth. The rose-pink flowers are borne abundantly during July and August.

78350. ESCALLONIA sp.

Edinensis. A hybrid between variety *philippiana* (*Escallonia virgata*) and *E. punctata*. The small brilliant rose-pink flowers covering the branches are borne abundantly between July and September. This is an excellent plant for walls.

78351. ESCALLONIA sp.

Microphylla. A dense bush, 2 to 3 feet high, of dwarf habit, with bright-red flowers borne between July and September.

78352. ESCALLONIA sp.

Newryensis. A shrub, generally hardy, of erect habit, which grows 4 or 5 feet high. The flowers are a blush pink.

78353 to 78355. GAULTHERIA spp. Ericaceae.

78353. GAULTHERIA NUMMULARIOIDES Don.

A rare shrub, about 6 inches high, with deep-green hairy leaves and white or pink flowers. Native to the Himalayas.

For previous introduction see No. 39015.

78354. GAULTHERIA PYROLAEFOLIA Hook. f.

A low evergreen shrub less than a foot high, with narrow-elliptic leaves an inch and a half long, and large blue-black berries. Native to the Himalayas.

78355. GAULTHERIA VEITCHIANA Craib.

A recently introduced evergreen shrub of dwarf habit, with oval, dark-green thick leaves, axillary racemes of white flowers, and indigo-blue berries. Native to China.

78356 and 78357. GRISELINIA LITTORALIS Raoul. Cornaceae.

An evergreen shrub, particularly fine in winter, which thrives in stiff soils, also under trees, and does well by the sea. It grows 5 to 6 feet high and as much in diameter, and has soft pale-green metallic foliage which droops gracefully. Native to New Zealand.

78356. The ordinary type.

78357. Variety *macrophylla*. This variety requires more warmth than the type.

78332 to 78370—Continued.

78358. HYMENANTHERA CHATHAMICA (F. Muell.) T. Kirk. Violaceae.

An evergreen shrub, native to New Zealand, with thick pale-green lanceolate leaves 5 inches long, numerous inconspicuous axillary flowers, and small white fruits.

78359. KIRENGESHOMA PALMATA Yatabe. Hydrangeaceae.

A rare herbaceous perennial, native to Japan, 2 to 4 feet high, with dark-green papery palmate hairy leaves and few-flowered panicles of bell-shaped yellow flowers. It should be planted in moist soil in the shade.

78360. MARGYRICARPUS SETOSUS Ruiz and Pav. Rosaceae.

A dwarf heathlike creeping evergreen shrub, about a foot high, with odd-pinnate leaves, very small greenish flowers, and showy white berries which persist for some time. Native to Peru.

78361. OSMANTHUS ILICIFOLIUS (Sieb.) Masters. Oleaceae.

Variety *purpurea*. An evergreen shrub with spiny leaves which, when young, are a rich dark purple, later becoming green with a purple tinge. The small flowers are fragrant, and the ovoid berries are bluish black.

78362 to 78364. PERNETTYA spp. Ericaceae.

78362. PERNETTYA FURENS Klotzsch.

An upright evergreen shrub, native to Chile, with oval leaves 1 to 2 inches long, dense racemes of small white flowers, and ornamental brownish-red fruits.

78363. PERNETTYA MUCRONATA (L. f.) Gaud.

Variety *alba*. A rare form with large white berries.

78364. PERNETTYA sp.

Davies hybrids. Berries of various colors, mixed.

78365. PHILLYREA ANGUSTIFOLIA L. Oleaceae. Narrowleaf phillyrea.

An evergreen shrub up to 10 feet high, native to the Mediterranean region, with linear-lanceolate leaves 2 inches long, and small white flowers in short axillary racemes, followed by purplish-black ovoid fruits.

78366. PHOTINIA DAVIDSONIAE Rehd. and Wils. Malaceae.

A handsome evergreen tree, 20 to 50 feet high, with dense foliage, native to Hupeh, western China. The leathery oblong or lanceolate leaves are up to 6 inches long, and the white flowers, nearly half an inch across, are in many-flowered terminal corymbs. The globose orange-red berries are about one-third of an inch in diameter.

78367. RHODODENDRON sp. Ericaceae. Azalea.

Butheana. A shrub bearing large white flowers during May.

78368. SARCOCOCCA HOOKERIANA HUMILIS (Stapf) Rehd. and Wils. Buxaceae.

A dwarf evergreen shrub 3 to 5 feet high, native to western China, with

78332 to 78370—Continued.

lanceolate coriaceous leaves 1 to 2 inches long, axillary racemes of small whitish flowers, and round black fruits.

78369. STRANVAESIA BENTHAMIANA (Hance) Merr. (*Photinia benthamiana* Hance). Malaceae.

A Chinese evergreen shrub with leathery oblong red-tipped leaves and dense panicles of white flowers followed by orange or scarlet fruits.

78370. STRANVAESIA NUSSIA (Buch.-Ham.) Decaisne (*S. glaucescens* Lindl.). Malaceae.

A rare evergreen Himalayan tree, reaching 20 feet when fully grown, with oblanceolate-serrulate leaves about 4 inches long, terminal clusters of white flowers borne during June, and pale-red subglobose berries produced in the autumn.

78371. GOSSYPIUM NANKING Meyen. Malvaceae. Cotton.

From Bangkok, Siam. Seeds presented by the Siamese Department of Agriculture, through Phya Vijitavongs, Siamese Minister. Received December 28, 1928.

The "Chinese" cotton of commerce is a delicately branched shrub with imperfectly cordate leaves and rufous velvet-coated seeds bearing a silky floss which is usually white in the better varieties, but may be reddish or khaki colored.

78372 to 78388.

From Keston, Kent, England. Plants purchased from G. Ruethe, Foxhill Hardy Plant Farm. Received November and December, 1928.

78372. CLETHRA DELAVAYI Franch. Clethraceae.

A shrub or small tree, native to China, up to 50 feet high, with red branchlets and oblanceolate leaves which are pubescent beneath. The fragrant white flowers differ from those of the American summersweet, *Clethra alnifolia*, in having red calyxes and in being in solitary axillary racemes, while the summersweet has the racemes grouped together to form a panicle.

78373. INDIGOFERA HEBEPETALA Benth. Fabaceae.

For previous introduction and description see No. 77686.

78374. PERNETTYA MAGELLANICA Hort. Ericaceae.

A dwarf evergreen ornamental shrub from the Strait of Magellan region of South America.

78375. PILEOSTEGIA VIBURNOIDES Hook. f. and Thoms. Hydrangeaceae.

A little-known evergreen climber, native to China, with thick lanceolate-elliptic opposite dark-green leaves about 5 inches long, and dense umbels of white flowers which resemble those of *Viburnum tinus*.

78376 to 78385. RHODODENDRON spp. Ericaceae. Azalea.

A collection of horticultural varieties of azaleas of dwarf habit, which are very free-flowering and hardy. They succeed in lime-free soil to which humus has been added.

78372 to 78388—Continued.

78376. RHODODENDRON sp.

Carminata splendens. Flowers a deep pink, of the general type of the Kurume azaleas.

78377. RHODODENDRON sp.

H. O. Carre. Flowers rich rosy red, of the Kurume type, with narrow lobes, giving a starry effect.

78378. RHODODENDRON sp.

Illuminata. Flowers rosy purple. The bush somewhat resembles *Rhododendron obtusum* var. *amoena* in habit.

78379. RHODODENDRON INDICUM (L.) Sweet.

Kokin-shita. A compact low-growing bush with narrow leaves, single scarlet flowers, of the general type of the plant known in trade as *Azalea macrantha.*

78380. RHODODENDRON INDICUM (L.) Sweet.

Macrantha. Flowers deep salmon. A late-flowering azalea of very compact habit, with narrow evergreen leaves.

78381. RHODODENDRON sp.

Mrs. Carmichael. Flowers rosy purple. A hybrid with growth somewhat like the Kurume azaleas, but much larger flowers, many of which show some petaloid development in the stamens.

78382. RHODODENDRON INDICUM (L.) Sweet.

Macrantha. Flowers rich orange. Resembles No. 78380 except in the hue of the flowers.

78383. RHODODENDRON sp.

Princess Maud. Flowers rosy pink, of the Kurume type.

78384. RHODODENDRON sp.

Rosea. Flowers rose pink.

78385. RHODODENDRON sp.

Splendens. Flowers soft rose pink, of the Kurume type.

78386. SARCOCOCCA HOOKERIANA Baill. Buxaceae.

For previous introduction and description see No. 78107.

78387. SARCOCOCCA RUSCIFOLIA Stapf. Buxaceae.

An evergreen shrub up to 6 feet high, native to central and western China, with lustrous dark-green ovate leaves, small racemes of whitish flowers, and dark scarlet fruits.

For previous introduction see No. 76595.

78388. SYCOPSIS SINENSIS Oliver. Hamamelidaceae.

A hardy evergreen shrub or small tree, native to China, 25 feet high, with elliptic-ovate leaves, 4 inches long, lustrous above and pale green beneath, and small heads of flowers with conspicuous red anthers.

For previous introduction see No. 76118.

78389. QUERCUS SESSILIFLORA Salisb. Fagaceae. **Durmast oak.**

From Northwood, Middlesex, England. Seeds presented by R. C. B. Gardner, Received December 27, 1928.

These seeds were collected in Woburn Park, Bedfordshire, by permission of the Duke of Bedford. A large European tree closely related to the English oak, *Quercus robur*, with lustrous bright-green obovate leaves having five to nine pairs of rounded lobes and hemispheric cups which cover about one-third of the ovoid acorns.

78390 to 78393.

From China. Seeds collected by J. F. Rock, National Geographic Society, Washington, D. C. Received December 26, 1928.

78390 and 78391. PRIMULA spp. Primulaceae. **Primrose.**

Found in alpine meadows on Mount Lachouchou K'ha, southeast of Chungtien, northwestern Yunnan, China, September, 1928.

78390. PRIMULA sp.

No. 17273. A herbaceous perennial 1 to 2½ feet high, with large purple flowers in double and triple tiers. Collected at an altitude of 12,000 feet.

78391. PRIMULA sp.

No. 17274. A herbaceous perennial 1 to 2 feet high, with pale-blue flowers in large tiers. Collected at an altitude of 14,000 feet.

78392. VACCINIUM sp. Vacciniaceae.

No. 17313. [Received without information.]

78393. (Undetermined.)

No. 17295. [Received without information.]

78394 and 78395.

From Dehra Dun, India. Seeds presented by R. N. Parker, forest botanist, Forest Research Institute and College. Received December 28, 1928.

78394. ACER PENTAPOMICUM J. L. Stewart. Aceraceae. **Maple.**

A medium-sized tree, native to the temperate slopes of the Himalayas in northwestern India, with gray or reddish twigs, 3-lobed cordate leaves 4 to 6 inches long, pale green on both sides, the lobes ovate and obtusely serrate. The glabrous fruits, an inch long, have slightly diverging veiny wings.

78395. CARPINUS FAGINEA Lindl. Fagaceae.

A moderate-sized Himalayan tree found between 4,000 and 7,000 feet altitude. It has tomentose branches, and the ovate doubly serrate falcate leaves are 3 to 5 inches long. The pubescent fruiting bracts, an inch long, are very unequal sided, the narrow side being entire and the other coarsely toothed.

78396. OLEA EUROPAEA L. Oleaceae. **Olive.**

From Jerusalem, Palestine. Cuttings presented by A. Grasovsky, Department of Agriculture and Forestry. Received December 31, 1928.

From the Mount of Olives.

78397. THUJOPSIS DOLABRATA (L. f.) Sieb. and Zucc. Pinaceae. **Hiba arborvitae.**

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received December 27, 1928.

No. 794. Presented by Doctor Shirasawa, Director of the Forest Experiment Station, Meguro, Tokyo. A pyramidal Japanese conifer 50 feet high, with spreading frondlike branchlets, nodding at the ends, small glossy dark-green leaves having white patches below, and broadly ovoid cones less than an inch long. The wood is very resistant to decay and makes excellent poles and ties. This variety seeds but rarely, perhaps having only one good crop in 13 years.

78398 to 78412.

From Keijo, Chosen. Seeds presented by M. Towaza, Director of the Forestal Experiment Station. Received December 28, 1928.

78398. ABIES NEPHROLEPIS (Trautv.) Maxim. Pinaceae. **Fir.**

A conifer, native to Siberia, up to 100 feet high, resembling the Siberian fir, *Abies sibirica*, but with rough bark, pubescent branchlets, shorter leaves, and smaller cones.

78399. ACER PSEUDO-SIEBOLDIANUM Komar. Aceraceae. **Maple.**

A small maple, native to Manchuria, with cordate leaves divided into 9 to 11 lanceolate-serrate lobes, and corymbs of purple flowers.

For previous introduction see No. 75667.

78400. BETULA DAVURICA Pall. Betulaceae. **Birch.**

A tree up to 60 feet high, with widespreading branches and purplish-brown flaky bark. The broadly wedge-shaped leaves are 2 to 4 inches long and are dark green above with serrate margins.

For previous introduction see No. 57278.

78401. CORNUS COREANA Wanger. Cornaceae. **Dogwood.**

A tree native to Chosen, up to 60 feet high, with reddish-brown branchlets, dark-green elliptic leaves 3 to 6 inches long, loose clusters of small white flowers, and black fruits.

78402. JUNIPERUS RIGIDA Sieb. and Zucc. Pinaceae. **Needle juniper.**

A graceful pyramidal shrub or small tree up to 30 feet high, native to eastern Asia. The branches are ascending and the branchlets pendulous; the spreading, linear-subulate, sharp-pointed leaves are an inch long; and the globose fruits, a quarter of an inch in diameter, are brownish black and covered with bloom.

For previous introduction see No. 57298.

78403. LARIX DAHURICA Turcz. Pinaceae.

Variety *coreana*. A form of the Dahurian larch, native to Chosen, which is a tree up to 100 feet high, with long horizontal branches, reddish or yellowish branchlets, bright-green flattened leaves, and ovoid cones an inch long.

78398 to 78412—Continued.

78404. PICEA KOYAMAI Shiras. (*P. koraiensis* Nakai). Pinaceae. **Spruce.**

A narrowly pyramidal tree 60 feet high, native to Japan and Chosen, with reddish-brown bloomy branchlets, compressed leaves half an inch long, with two white bands above, and pale-brown cylindric cones 2 to 3 inches long.

For previous introduction see No. 44397.

78405. PINUS TABULAEFORMIS Carr. (*P. leucosperma* Maxim.). Pinaceae. **Chinese pine.**

A pine, native to China, up to 75 feet high, with dark-gray bark on the trunk, red on the branches, and orange or grayish-yellow branchlets. The glaucescent leaves, usually two in a cluster, are stout and 3 to 6 inches long, and the ovoid cones, 2 to 4 inches long, are pale tawny yellow, changing to dark brown and persisting for several years.

78406 to 78409. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

Local strains to be grown for trial as stocks.

78406. Variety *compta.*

78407. Variety *intermedia.*

78408. Variety *Sontagia.*

78409. Variety *vercunda.*

78410. PRUNUS SERRULATA PUBESCENS Wilson. Amygdalaceae. **Kasumi cherry.**

A wild cherry from Japan; of possible use as a stock.

78411. RHODODENDRON SCHLIPPENBACHII Maxim. Ericaceae. **Royal azalea.**

A beautiful deciduous shrub 15 feet high, with large clear pink flowers appearing before the leaves in spring. The broadly obovate leaves, 2 to 4 inches long, are dark green above, paler beneath, and change to yellow, orange, and crimson in the autumn. Native to Manchuria, Chosen, and Japan.

For previous introduction see No. 71127.

78412. SYRINGA OBLATA DILATATA (Nakai) Rehder. Oleaceae. **Lilac.**

A loosely branched shrub up to 12 feet high, with ovate long-pointed leaves 6 inches long and loose clusters of pale purple-lilac flowers. Native to Chosen.

For previous introduction see No. 75782.

78413. SANGUISORBA OBTUSA Maxim. (*Poterium obtusum* Franch. and Sav.). Rosaceae.

From Woking, Surrey, England. Roots purchased from George Jackman & Sons, Woking Nurseries. Received December 29, 1928.

A herbaceous perennial about 3 feet high, with pinnately compound leaves having about six pairs of oblong serrate leaflets, and a much-branched flower stem bearing spikes, 3 inches long and an inch in diameter, of small bright rosy pink flowers. Native to Japan.

78414 to 78442.

From Madagascar. Plants, cuttings, and bulbs collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received in November, 1928.

78414. ALOE sp. Liliaceae.

Diego Suarez, Montagne des Français, October 7, 1928. Leaves about 6 inches long, reddish to coppery red, over green.

78415 to 78417. CHRYSALIDOCARPUS spp. Phoenicaceae. **Palm.**

Botanic Garden, Tananarive, September 28, 1928.

78415. CHRYSALIDOCARPUS BARONII Beccari.

A medium-sized palm, native to central Madagascar, with a cylindrical stem about 3 inches in diameter and regularly pinnate leaves, about 4 feet long, which have very narrow pinnae 16 to 18 inches long.

For previous introduction see No. 57214.

78416. CHRYSALIDOCARPUS DECIPIENS Beccari.

A stout palm with a thick cylindrical, ringed trunk and large pinnate leaves with very numerous segments up to nearly 3 feet long. Native to central Madagascar.

78417. CHRYSALIDOCARPUS LUTESCENS (Bory) Wendl. **Yellow palm.**

A palm, native to Madagascar, about 25 feet high, with a slender cylindrical ringed trunk about 3½ inches in diameter. The pinnate leaves, about 5 feet long, are composed of about 50 linear segments.

78418. CISSUS sp. Vitaceae.

No. 5148. Upper Valley of Fiherenana, near Tullear, August 3, 1928.

78419 to 78421. CYNANCHUM spp. Asclepiadaceae.

78419. CYNANCHUM sp.

Isalo, Ranohira, July 29, 1928. A succulent shrub which may be a source of rubber. The stems are covered with irregular rows of greenish horns, and the leaves, 6 to 8 inches long, with a pinkish base and petiole, are in a terminal whorl.

78420. CYNANCHUM sp.

Isalo, Ranohira, July 29, 1928. A succulent shrub with smooth-jointed stems and small scalelike leaves; it may be a source of rubber.

78421. CYNANCHUM sp.

Diego Suarez, Montagne des Français, October 7, 1928.

For previous introduction and description see No. 78419.

78422. ISCHNOLEPES TUBEROSA Jum. and Perr. Asclepiadaceae.

No. 5011. Isalo, Ranohira, July 20, 1928. A somewhat fleshy shrub, about 4 feet high, with greenish flowers and large tubercles.

78423 to 78436. KALANCHOE spp. Crassulaceae.

78414 to 78442—Continued.

78423 to 78425. KALANCHOE sp.

For previous introduction and description see No. 77919.

78423. Botanic Garden, Tananarive, September 28, 1928.

78424. Ampanihy, September 1, 1928.

78425. No. 4904. Ihosy, Ranohira, July 29, 1928.

78426. KALANCHOE DAIGREMONTIANA Ham. and Perr.

For previous introduction and description see No. 77907.

78427. KALANCHOE FEDTSCHENKOI Ham. and Perr.

Botanic Garden, Tananarive, September 28, 1928. A rather small succulent, about 10 inches high, with crenate rounded-oval leaves an inch and a half long, bluish green overcast with purple, and small purplish flowers in a loose cluster terminating the slender stem. Native to Madagascar.

78428. KALANCHOE GASTONIS-BONNIERI Ham. and Perr.

Botanic Garden, Tananarive, September 28, 1928. During nonblooming periods this succulent, native to Madagascar, is a low plant with a very short stem and a rosette of light green crenate leaves, faintly dotted with darker green. From these crenations young plants evidently arise. When about to flower, the stem elongates to a height of nearly 2 feet, bearing at its summit a lax corymb of light-pink flowers.

78429. KALANCHOE MINIATA Hilsenb. and Boj.

Botanic Garden, Tananarive, September 28, 1928. An erect slender fleshy plant 1 to 2 feet high, native to Madagascar. The smooth green oval-obtuse leaves are up to 3 inches long with pink petioles and shallow crenate margins. The small flowers, bright red with fine brown spots, are in lax terminal panicles.

78430. KALANCHOE PILOSA Hort.

Botanic Garden, Tananarive, September 28, 1928. An ornamental fleshy perennial with very thick leaves, densely tomentose, with the hairs silvery except at serrations, where they are rusty brown.

78431. KALANCHOE SYNSEPALA Baker.

For previous introduction and descriptions see No. 77911.

78432. KALANCHOE TUBIFLORA Hamet.

Botanic Garden, Tananarive, September 28, 1928.

For previous introduction and description see No. 77913.

78433. KALANCHOE ALICIAE Hamet.

Botanic Garden, Tananarive, September 28, 1928. A succulent herbaceous ornamental with pink flowers; leaves opposite, cordate, with crenate margins, almost as downy as mullein, but the green of the leaf shows through.

78414 to 78442—Continued.

78434. KALANCHOE DAIGREMONTIANA Ham. and Perr.

For previous introduction and description see No. 78426.

78435. KALANCHOE ALICIAE Hamet.

Ambositra, July 21, 1928.

For previous introduction and description see No. 78433.

78436. KALANCHOE sp.

Amber Mountains, Diego Suarez, October 6, 1928. Epiphyte growing on trees. A lax vine with opposite fleshy leaves three-fourths of an inch long, green with a line of red on the edges, and one or two marginal dentations. It roots at the nodes.

78437. KITCHINGIA PELTATA Baker.

Forest of Ambatofinandrano, on the road between Ambositra and Fianarantsoa, September 21, 1928. A succulent herbaceous ornamental with leaves petiolate, peltate, crenate, 2 to 3 inches long, green with red margins, and petioles and stems pink.

78438. KALANCHOE ALICIAE Hamet.

Between Andina and Ambositra, July 21, 1928.

For previous introduction and description see No. 78433.

78439. LOMATOPHYLLUM OCCIDENTALIS Perrier. Liliaceae.

Botanic Garden, Tananarive, September 28, 1928. An aloelike plant, sometimes stemless but usually with a stem up to 2 feet long, native to dry, sandy regions in Madagascar. The recurved leaves, about 3 feet long, have horny margins and deltoid spiny tips. The dense conical head is composed of 50 to 80 purple flowers.

78440. LOMATOPHYLLUM ROSEUM Perrier. Liliaceae.

Botanic Garden, Tananarive, September 28, 1928. A stemless, soboliferous plant with a rosette of lanceolate leaves, long attenuate from the base to the tips, about 1½ feet long, 1½ inches wide with obtusely serrate margins. The rosy flowers are in a rather dense raceme on a scape about a foot high. Native to rocky places in Madagascar.

78441 and 78442. MARSDENIA VERRUCOSA (Bojer) Decaisne. Asclepiadaceae.

Itrobeka, Ampanihy, August 30, 1928. *Bokabay.* A rubber plant of some importance in Madagascar, and especially interesting in that the rubber is almost entirely confined to the young fruits, making it unnecessary to injure the plant in collecting the rubber. The fruits are about 4 to 6 inches long.

78441. 78442.

78443 to 78466. MASCARENHASIA spp. Apocynaceae.

From Madagascar. Plants and cuttings collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received November 20, 1928.

78443 and 78444. MASCARENHASIA ARBORESCENS A. DC.

78443 to 78466—Continued.

78443. Northeast of Majunga, near Belobaka, October 10, 1928. *Hazondrano.* A shrub about 18 feet high, formerly one of the most important sources of rubber in Madagascar, but now little used. The native name signifies a tree that grows near the water, and those growing in this region are found usually near the swamps.

78444. From Itrobeka, August 30, 1928. Possibly *kompitso.*

78445. MASCARENHASIA sp.

Between Andina and Ambositra, July 21, 1928. Possibly *kompitso.* It is probably identical with No. 78444.

78446. PACHYPODIUM sp. Apocynaceae.

A yellow-flowered, small-fruited, succulent shrub growing on rocks along the road between Ihosy and Ambalavao, September 20, 1928.

78447. PACHYPODIUM sp. Apocynaceae.

Growing on rocks on the road between Antanimora and Betroka, southeast of Bekily, September 18, 1928. A thorny succulent shrub, about 12 feet high, with few leaves, white flowers, and large fruits.

78448. RAVENALA MADAGASCARIENSIS Sonner. Musaceae. **Traveler's-tree.**

From Nossi Be, October 8, 1928. A magnificent tropical tree about 60 feet high with a palmlike trunk and bananalike leaves of gigantic size, arranged in two rows on opposite sides of the arboreous stem, giving one the impression of an immense fan. The leaves, when cut, yield an abundance of refreshing juice, with which travelers allay their thirst. The flowers are comparatively small, aggregated in the axils of the leaves. The arillus surrounding the beanlike seeds is of a beautiful ultramarine color and yields an essential oil. A dye is extracted from the capsules. Native to Madagascar.

For previous introduction see No. 42372.

78449. BULBINELLA sp. Liliaceae.

Collected about 50 feet from the seashore at Mombasa, Kenya, British East Africa, June 26, 1928. This plant has a rough bulbous root and leaves up to 8 inches long, green with irregular cross bars of darker green. No flowers yet, but apparently a spike with 10 to 20 flowers coming.

78450. SELAGINELLA sp. Selaginellaceae.

Growing with *Pachypodium* sp. [No. 78447] on the road between Antanimora and Betroka, southeast of Bekily, September 18, 1928.

78451. SENECIO ANTITENSIS Baker. Asteraceae.

Mont Antety, Ambositra, July 22, 1928. A much-branched bushy composite, native to Madagascar, with rather dense foliage. The small yellow flower heads are in lax corymbs.

78452. SENECIO BARORUM Humbert. Asteraceae.

No. 4957. Isalo, Ranohira, July 30, 1928. A glabrous shrub up to 8 inches high, with numerous elliptic or oblanceolate obtuse leaves and numerous flower heads in compact corymbs of variable size.

78453. (Undetermined.)

Upper Valley of Fiherenana, August 2, 1928. A rubber-bearing plant, native to Madagascar.

78454. (Undetermined.)

From Betioky, August 14, 1928. A rubber-bearing plant native to Madagascar.

78455. ANTHERICUM sp. Liliaceae.

From the grounds of the American Lutheran Mission, Behara, September 11, 1928. *Kompitso.* An important rubber-bearing plant of this region, native to Madagascar, with violet flowers.

78456 to 78459. (Undetermined.)

Amber Mountains, Diego Suarez, October 6, 1928. Orchids native to Madagascar.

78456. **78458.**

78457. **78459.**

78460. (Undetermined.)

Presented by F. W. DuCommun, Tamatave, October 2, 1928. A fern native to Madagascar.

78461. (Undetermined.)

Presented by F. W. DuCommun, Tamatave, October 2, 1928. A fern native to Madagascar.

78462 to 78464. (Undetermined.)

Plants native to Madagascar.

78462. From the grounds of the American Lutheran Mission, Behara, September 11, 1928. *Holo.* An ornamental vine probably indigenous to Madagascar.

78463. Isalo, Ranohira, July 30, 1928.

78464. Isalo, Ranohira, July 30, 1928.

78465. (Undetermined.)

A species growing about 50 feet from the seashore at Mombasa, Kenya, British East Africa, June 26, 1928.

78466. (Undetermined.)

A shrub growing on the road between Antsirabe and Ambositra, July 20, 1928. Native to Madagascar.

78467. ACTINORHYTIS CALAPPARIA Wendl. and Drude. Phoenicaceae. **Palm.**

From Medan, Sumatra. Seeds presented by J. A. Lörzing. Received July 7, 1928. Numbered in December, 1928.

A robust East Indian palm 40 feet high, with a smooth stem conspicuously ringed, large pinnate leaves 9 feet long and 6 wide, and a large pendulous cluster of small flowers followed by ovoid red fruits 3 inches long.

For previous introduction see No. 67185.

78468 and 78469. BOUGAINVILLEA SPECTABILIS Willd. Nyctaginaceae.

From St. Croix, Virgin Islands. Cuttings presented by J. B. Thompson, Director of the St. Croix Experiment Station. Re-

78468 and 78469—Continued.

ceived March 27, 1928. Numbered in December, 1928.

An attractive crimson-flowered Bougainvillea.

For previous introduction see No. 64652.

78468. No. 1. **78469.** No. 2.

78470 to 78473.

From Madagascar. Roots, cuttings, and tubers collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received September, 1928. Numbered in December, 1928.

78470. (Undetermined.)

Roots of a twining, rubber-bearing vine with opposite linear, lanceolate leaves up to 5 inches long and axillary umbels containing up to 10 milkweedlike flowers which have greenish-brown outer segments and white centers. It is probably identical with No. 78472.

78471. KALANCHOE ALICIAE Hamet. Crassulaceae.

From the Forest of Ranomena, east of Ambositra, July 25, 1928.

For previous introduction and description see No. 78438.

78472. (Undetermined.)

Cuttings of a rubber-bearing liane with triangular fruits 8 inches long. It is probably identical with No. 78470.

78473. PACHYPODIUM BREVICAULE Baker. Apocynaceae.

No. 4620. Valley of Sahatany, between Antsirabe and Ambositra, July 20, 1928. Tubers of a yellow-flowered stemless succulent shrub which is highly ornamental and especially useful for rock gardens. It has dense clusters of prickles, oblong densely pilose leaves, and terminal cymes of tubular flowers. It is usually broader than it is tall, growing about 20 inches high and 3 feet wide. This plant is very peculiar in that it seems to "flow" over the rocks. It has no value as a source of rubber.

78474 to 78482.

From Kzyl Orda, Syr Daria, Russia. Seeds presented by Jules W. Rewiakin, manager of the division of seeds. Received December 28, 1928.

78474. AMMODENDRON CONOLLYI Bunge. Fabaceae.

An evergreen shrub with silky leaves, native to Siberia, used as a sand binder.

For previous introduction see No. 42679.

78475. ANABASIS APHYLLA L. Chenopodiaceae.

An upright shrub 2 feet high, native to the Mediterranean region, with green branches, scalelike leaves, and inconspicuous flowers. It is used as a sand binder.

78476 to 78478. ARTEMISIA spp. Asteraceae. **Wormseed.**

The three following names have been received as sources from which the drug santonica is secured. They are low straggly undershrubs, native to Turkestan, and are kept separate for botanical identification.

78474 to 78482—Continued.

78476. ARTEMISIA CINA Berg.

78477. ARTEMISIA MARITIMA L.

78478. ARTEMISIA PAUCIFLORA Weber.

78479. CALLIGONUM APHYLLUM (Pall.) Guerke. Polygonaceae.

A tall nearly leafless shrub, resembling Ephedra in habit, with 4-winged fruits. Native to Turkestan.

For previous introduction see No. 28975.

78480 and 78481. HALOXYLON AMMODENDRON (Meyer) Bunge. Chenopodiaceae. **Saxaul.**

A Persian shrub or tree up to 20 feet high, with a thick gnarled trunk, light-green branchlets, and small fruits with thin papery suborbicular wings.

For previous introduction see No. 31332.

78480. Variety *acutifolium*. A variety with triangular acute scalelike leaves.

78481. Variety *aphyllum*. A variety either leafless or with merely rudimentary leaves which are not triangular.

78482. STIPA SPLENDENS Trin. Poaceae. **Grass.**

A coarse grass 6 feet high, native to the steppes of western Asia, with dense nodding panicles a foot long. The tough leaves and stalks are used to make brooms.

For previous introduction see No. 36791.

78483 to 78486.

From Madagascar. Plants and cuttings collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. Received in October and November, 1928.

78483. (Undetermined.)

78484. (Undetermined.)

78485. (Undetermined.)

78486. (Undetermined.)

Presented by F. W. DuCommun, Tamatave.

78487 to 78503. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki.**

From Japan. Cuttings obtained by R. K. Beattie, Bureau of Plant Industry. Received February, 1928. Numbered in December, 1928.

78487 to 78497. From the Kyoto Agricultural Experiment Station, Kyoto, January, 1928.

78487. Nos. 500 and 501. *O gosho*. A late variety producing a good crop of deep-red fruits about 4½ inches in diameter, which are nonastringent and very sweet.

78488. Nos. 502 and 503. *Hana gosho*. A medium to late variety producing a good crop of yellowish-red fruits 4 inches in diameter, which are nonastringent. This is one of the very best varieties.

78489. Nos. 504 and 505. *Nara gosho*. This variety came originally from

78487 to 78503—Continued.

Nara Ken. It is a late variety producing small to medium-sized red fruits which are nonastringent. There is a little tannin just under the skin at the outer surface of the pulp, but after the first bite the fruit is very sweet.

78490. Nos. 506 and 507. *Jiro.* A strong-growing tree producing a good crop of nonastringent yellowish-red fruits, the 4-lobing evident, with dark-red marks in the flesh. They ripen during the latter part of the early season.

78491. Nos. 508 and 509. *Fuyu.* A strong-growing tree producing a good crop of large yellowish-red fruits which are nonastringent and sweet. In a warm climate the fruits lose their astringency earlier.

78492. Nos. 510 and 511. *Tenjin gosho.* A variety producing a good crop of nonastringent fruits during the early part of the late season. They are glossy red, smaller, and not so flat as those of Fuyu, but are sweet. In some places the tannin remains in the fruits until late.

78493. Nos. 512 and 513. *Sho gwatsu.* A strong growing tree producing a good crop of reddish-yellow fruits, three-fourths of an inch in diameter, which are nonastringent and very sweet. In warm regions the fruits can be kept on the tree till February.

78494. No. 514. *Aizu mishirazu.* A variety producing reddish-yellow astringent fruits, 4 inches in diameter, during the middle of the season. It is a very strong tree, but carries such an extra heavy crop that the branches droop. The fruits are famous for eating after the tannin has been removed, and they are especially liked in Tokyo.

78495. No. 515. *Dojo hachuja.* A late variety producing a good crop of astringent fruits, yellow with a slight redness, which are 3½ inches in diameter and not flat. They are used to a great extent for drying in Gifu.

78496. No. 516. *Fuji.* A variety producing yellowish-red astringent fruits, usually seedless, which are 4 inches in diameter and not flat. There are three ways to remove the tannin from this variety. They may be dried, or allowed to stand in a cool place, or treated with alcohol fumes.

78497. No. 517. *Yokono.* A late variety producing a good crop of red astringent fruits which are slightly umbilicate. The tannin is hard to remove, but the fruits are used for drying.

78498 to 78503. Cultivated varieties from the Okitsu Agricultural Experiment Station, February, 1928.

78487 to 78503—Continued.

78498. No. 646. *Fuyu.* Nonastringent fruits produced the fifth year after grafting, during the middle of November.

78499. No. 647. *Ban gosho.* Nonastringent fruits produced the fifth year after grafting, during the first part of November.

78500. No. 649. *Tenjimaru.* Nonastringent, flat fruits, slightly indented at the apex, produced the sixth year after grafting, between the first and the middle of October.

78501. No. 650. *Shogatsu.* Nonastringent fruits produced the seventh year after grafting, during the middle of December. This variety is not a good yielder.

78502. No. 651. *Gosho.* Nonastringent fruits produced the sixth year after grafting, early in October.

78503. No. 652. *Jiro.* Nonastringent fruits produced the sixth year after grafting, during the early part of October.

78504 and 78505. CASTANEA HENRYI (Skan) Rehd. and Wils. Fagaceae. **Chestnut.**

Plants growing at the United States Plant Field Station, Glenn Dale, Md. Numbered in December, 1928.

Plants obtained from the Horticultural Field Station, Bell, Md., and grafted on *Castanea crenata.*

78504. P. I. G. No. 8649.

78505. P. I. G. No. 7824.

78506 to 78508.

From Little River, Fla. Seeds presented by Charles F. Simpson. Received December 15, 1928.

78506. SABAL sp. Phoenicaceae. **Palm.**

The palm from which these seeds came stands just south of Mr. Simpson's house at the north side of the road which runs around the place. It has a stout trunk about 12 feet high and is one of the most rapid growers known to Mr. Simpson.

78507. THRINAX MICROCARPA Sarg. Phoenicaceae. **Brittle thatch palm.**

A Florida palm up to 30 feet high, with fan-shaped leaves 4 feet broad, pale green above and silvery beneath, and small fruits.

For previous introduction see No. 39392.

78508. THRINAX MORRISII Wendl. Phoenicaceae. **Morris thatch palm.**

A dwarf palm, native to the West Indies, 2 to 3 feet high, with fan-shaped leaves, glaucescent beneath and with the segments free for about three-fourths of their length.

For previous introduction see No. 24617.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 98

Washington, D. C. ▼ Issued May, 1930

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1929 (NOS. 78509 TO 80018)

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INTRODUCTORY STATEMENT

The plant material included in this inventory (Nos. 78509 to 80018) for the period January 1 to March 31, 1929, reflects very largely testing experiments undertaken by the office with ornamental plants in several important genera. In nearly all cases the material recorded was secured by the purchase of seed, and, as is always true of such undertakings, some seed has given no germination, with the result that the experiments are not as advanced as might appear. This is particularly true of the sedums, the primulas, and the gentians, which form conspicuous parts of the inventory.

The gardener will also notice the various other ornamentals, including the houseleeks, cyclamen, and ericas for more northern gardens; aloes, agaves, and mesembryanthemums for the South and Southwest, with the possible addition of the very interesting kalanchoes and the gingerlilies. The latter represent a collection purchased from India to see if other species might not be found for general use in the Southern and Gulf States.

A preliminary and not altogether successful importation of plants of various daphnes that should be included among our ornamental shrubs shows that repeated efforts should be made to establish these charming plants.

Several collections of acacias, banksias, grevilleas, and Ficus species should prove of interest in frost-free regions, particularly on the Pacific coast.

This inventory includes also large collections of oaks, castanopsis, and chestnuts obtained by R. Kent Beattie; a collection of oat varieties, presented by the director of the Sveriges Utsädesförening, Svalöf, Sweden; and a collection of seeds presented by Maj. Lionel de Rothschild from material collected by Capt. F. Kingdon Ward in Assam.

Especially because this inventory lists so many seeds, it should be repeated that this is merely a record of material received and does not represent a catalogue of available plants.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., February 20, 1930.

99895—30——1

INVENTORY[1]

78509. ERYTHROXYLON COCA Lam. Erythroxylaceae. **Cocaine-tree.**

From Soledad, Cienfuegos, Cuba. Seeds presented by R. M. Grey, superintendent, biological laboratory and botanical garden, institute for tropical biology and medicine, Harvard University. Received June 10, 1927. Numbered in January, 1929.

A tropical shrub, native to Peru, 5 to 6 feet high, with rusty brown slender branches bearing clusters of obovate leaves at their tips. The yellowish flowers are borne in clusters of three to five in the axils of small scales which line the branchlets. It is grown commercially on a large scale throughout the warmer parts of South America, also in Java and Ceylon, for the sake of cocaine, which is extracted from the dried leaves.

For previous introduction see No. 67943.

78510. CYRTANTHUS FLAMMEUS Hort. Amaryllidaceae.

From Philadelphia, Pa. Bulbs presented by James Lambert, superintendent of the botanical laboratories of the University of Pennsylvania. Received March 8, 1929.

A South African bulbous perennial which is a rapid grower. It has linear to lanceolate leaves and umbels of red flowers.

78511. DIOSPYROS SINENSIS Hemsl. Diospyraceae. **Persimmon.**

From Nanking, China. Plants obtained through W. T. Swingle, Bureau of Plant Industry. Received March 6, 1929.

A small semievergreen Chinese tree with a short thick trunk, wide-spreading branches and spiny branchlets, thick oblong-lanceolate leaves 2 to 3 inches long, and globose or ovoid golden edible fruits nearly an inch in diameter.

78512 and 78513. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Nikita, Yalta, Crimea, Russia. Trees presented by I. N. Riaboff, Government Botanical Garden. Received February 11, 1929.

78512. *Pahhnn.* **78513.** *Yennoh.*

78514 and 78515.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received February 21, 1929.

Collected by Shimoyaku Eirinsho, at Nakama Kaikon, Shimoyaku Mura, Kumage Gun, Kagoshima Ken, in January, 1929.

78514. CASTANOPSIS CUSPIDATA (Thunb.) Schottky. Fagaceae. **Japanese chinquapin.**

No. 850. *Shihi.* In Japan this tree is commonly cultivated from Tokyo southward. It grows from 30 to 75 feet high, with massive wide-spreading branches. The leaves are variable in size and shape and vary in color on the under side from brownish to nearly white. The small, sweet acorns are baked, boiled, or roasted, and regularly sold in the Japanese markets. This tree is hardy only in the southernmost United States.

For previous introduction see No. 75864.

78515. QUERCUS sp. Fagaceae. **Oak.**

No. 849. *Ubamegashi.*

78516. GOSSYPIUM STOCKSII Masters. Malvaceae. **Cotton.**

From Nagpur, Central Provinces, India. Seeds presented by W. Youngman, economic botanist to the Government. Received March 1, 1929.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

78516—Continued.

A tropical Indian shrubby cotton with small yellow flowers. It came originally from the Sind Desert, and is of the 13-haploid-chromosome group and therefore will not cross with American types. The seed is difficult to germinate. It is sown in Nagpur about June, and before sowing the coat is carefully split with a knife or the seed is rubbed upon a piece of fine sandpaper, which allows access of water and helps germination.

For previous introduction see No. 77215.

78517. DIERVILLA sp. Hydrangeaceae.

From Morden, Manitoba, Canada. Cuttings presented by W. R. Leslie, superintendent of the experimental station for southern Manitoba. Received March 7, 1929.

A hardy ornamental shrub originally from Fort William, Ontario, Canada.

78518 to 78523.

From Rome, Italy. Scions presented by Signor Pirovano, through the American consulate, Rome. Received February 1, 1929.

78518. PRUNUS CERASELLA Hort. Amygdalaceae. **Plum.**

A very early hard plum.

78519 to 78522. PRUNUS DOMESTICA × AMYGDALUS PERSICA. Amygdalaceae.

Plum-peach hybrids.

78519. A strong-growing hybrid with sterile pink flowers.

78520. An extra strong hybrid with pink flowers.

78521. A normal hybrid.

78522. A fertile hybrid with heartlike fruit that bursts.

78523. PRUNUS SALICINA × DASYCARPA. Amygdalaceae. **Hybrid plum.**

78524. SARACA INDICA L. Caesalpiniaceae. **Common saraca.**

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Java Botanic Gardens. Received February 4, 1929.

No. 200. A medium-sized Indian tree with pinnately compound leaves of 6 to 12 oblong leathery leaflets 6 to 9 inches long and orange-red fragrant flowers in compact panicles.

For previous introduction see No. 73260.

78525. RIBES RECLINATUM L. Grossulariaceae. **Gooseberry.**

From Alnarp, Akarp, Sweden. Plants presented by Carl G. Dahl. Received January 19, 1929.

Scania. A gooseberry resistant to gooseberry mildew. It might be classified as an improved type of Houghton, but the growth is better and the leaves remain on the bush for a longer time, as it is never attacked by *Gloeosporium ribis*. The fruit is larger and was placed on the market in 1927.

78526. ACTINIDIA sp. Dilleniaceae.

From Deli Valley, Mishmi Hills, Assam, India. Seeds collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild, London, England. Received January 19, 1929.

78526—Continued.

No. 8690. September 26, 1928. A big ornamental vine of the middle forest, growing at an altitude of 10,000 feet. Native to Assam.

78527. DIOSPYROS SINENSIS Hemsl. Diospyraceae. **Persimmon.**

From Algeria, Africa. Seeds presented by Dr. L. Trabut, Government botanist, Algiers. Received March 8, 1929.

A large-fruited variety grown at the Station Botanique, Algiers, in 1928.

78528 and 78529.

From the New Hebrides. Seeds presented by Dr. E. D. Merrill, dean, college of agriculture, University of California. Received February 18, 1929.

78528. ARECA sp. Phoenicaceae. **Palm.**

No. 547. A tall pinnate-leaved palm similar to *Areca catechu*, the betel palm.

78529. SEAFORTHIA sp. Phoenicaceae. **Palm.**

No. 639. A pinnate-leaved palm.

78530. CASTANOPSIS CONCINNA (Champ.) A. DC. Fagaceae. **Evergreen chinquapin.**

From Hong Kong, China. Seeds presented by H. Green, Superintendent, Botanical and Forestry Department. Received February 20, 1929.

A Chinese tree with oblong-lanceolate entire leathery leaves about 3 inches long, and densely spiny burs containing a solitary depressed-globular nut.

78531. GYNURA VIDALIANA Elmer. Asteraceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 20, 1929.

An interesting Philippine herb with orange-colored flowers popular with bees.

78532 and 78533.

From Richmond, Victoria, Australia. Seeds presented by F. H. Baker. Received February 20, 1929.

78532. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). Myrtaceae. **Lemon bottlebrush.**

An evergreen shrub up to 12 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. Native to southeastern Australia.

For previous introduction see No. 77385.

78533. HAKEA ACICULARIS (Vent.) Knight (*H. sericea* Schrad.). Proteaceae.

A tall evergreen Australian shrub or small tree with awl-shaped leaves 1 to 3 inches long and axillary clusters of small white flowers.

For previous introduction see No. 77386.

78534. TAMARINDUS INDICA L. Caesalpiniaceae. **Tamarind.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 21, 1929.

78534—Continued.

A variety of tamarind with pods which have flesh of very agreeable taste, tartness, and sweetness, making them very good for eating out of hand.

For previous introduction see No. 50186.

78535. FRAGARIA HAYATAI Makino. Rosaceae. **Strawberry.**

From Mount Arisan, Taiwan. Plants collected by R. K. Beattie, Bureau of Plant Industry. Received February 21, 1929.

No. 851. March 26, 1928. A stoloniferous perennial with long-petioled radicle leaves of three rhombic-ovate leaflets serrate with the terminal tooth smaller than the others. The flowers have a light-green calyx and obovate-emarginate or cuspidate white petals, and the delicious globose red fruits are one-fourth of an inch in diameter. Native to Japan.

For previous introduction see No. 76499.

78536. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

From St. Croix, Virgin Islands. Seeds presented by Maybin S. Baker, Agronomist, Agricultural Experiment Station. Received February 28, 1929.

A San Domingo bean which made a larger growth at the experiment station than any other tested there. The seed was originally sent from Porto Rico under the name "San Domingo cowpea."

78537. CITHAREXYLUM BERLANDIERI Robinson. Verbenaceae.

From Brownsville, Tex. Seeds presented by Peter H. Heinz. Received March 9, 1929.

An ornamental shrub or small tree, up to 30 feet high, with pendent branches, oblong or rhombic leaves about 4 inches long, and short axillary racemes of small black fruits. It is native to northeastern Mexico.

78538. ELAEIS GUINEENSIS Jacq. Phoenicaceae. **African oil palm.**

From Buitenzorg, Java. Seeds presented by Dr. L. Koch, chief of section for breeding annual crops of the General Experiment Station for Agriculture. Received March 9, 1929.

Dura Aijpe.

For previous introduction see No. 73956.

78539. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Charleston, S. C. Seeds presented by Dr. L. C. Critchfield. Received March 11, 1929.

An Italian tomato with most wonderful keeping properties; said to keep over a month after ripening on the vine and to be delicious to eat like an apple or orange.

78540 to 78542. RHODODENDRON spp. Ericaceae.

From Japan. Seeds presented by Prof. Bungo Miyazawa, Miyazaki College of Agriculture at Miyazaki-Shi, Japan. Received March 15, 1929.

78540. RHODODENDRON OLDHAMII Maxim.

A much-branched, partly deciduous red-hairy shrub 3 to 18 feet high, with

78540—Continued.

thinly leathery oblong-lanceolate dark-green leaves and red flowers 2 inches wide in terminal umbels. Native to Taiwan.

78541. RHODODENDRON PULCHRUM Sweet (*R. phoeniceum smithii* Wilson).

A handsome shrub with spreading hairy branches, elliptic leaves densely hairy beneath, and two to three terminal rosy purple flowers 2 inches or more across. A hybrid between *R. ledifolium* and *R. indicum.*

78542. RHODODENDRON RIPENSE Makino.

A densely branched evergreen shrub, 3 feet or more high, with whorled branches, narrow lanceolate leathery green leaves, and pale-lilac flowers about 2 inches across, solitary or in twos or threes. Native to Tosa and Iyo, Japan.

78543 to 78547. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Portici, Italy. Scions presented by Prof. Gaetano Briganti, R. Istituto Superiore Agrario. Received March 22, 1929.

78543. *Terzarola tonda.*

78544. *Terzarola col pizzo.*

78545. *Giallona di Napoli o Terzarola Cavallara.*

78546. *Terzarola riccia.*

78547. *San Martino.*

78548. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Scions obtained by R. K. Beattie, Bureau of Plant Industry. Received March 13, 1929.

No. 834. From the Okitsu Agricultural Experiment Station. January, 1929. *Shidare* (weeping chestnut) variety *pendula.*

78549. PSORALEA GUEINZII Harvey. Fabaceae.

From Kirstenbosch, Union of South Africa. Seeds presented by R. H. Compton, director of the botanic garden of the University of Stellenbosch, Kirstenbosch. Received March 15, 1929.

A South Afrcan perennial 1 to 2 feet high, with a woody base, herbaceous branches, sessile leaves each consisting of a single lanceolate folded leaflet an inch long, and small axillary flowers. Of possible use as a forage crop or for green manure.

78550 to 78558.

From Orleans, France. Plants purchased from Léon Chénault & Son. Received January 2, 1929.

78550. CARAGANA GERARDIANA Royle. Fabaceae.

A compact, much-branched shrub about 3 feet high, native to northwestern India, with densely tomentose twigs, compound leaves having 8 to 12 obovate silky leaflets, and ending in a spine 2 inches long. The solitary pale-yellow flowers are an inch long.

78551. CARYOPTERIS TANGUTICA Maxim. Verbenaceae.

78550 to 78558—Continued.

A shrub native to northwestern China, with opposite ovate leaves and axillary cymes of violet-blue flowers. It is closely related to the common bluebeard (*C. incana*).

For previous introduction see No. 77662.

78552. COTONEASTER PRAECOX Hort. Malaceae.

A new prostrate dwarf species, with dark-green leaves, said to exceed in beauty all hitherto-known prostrate cotoneasters.

78553. COTONEASTER PYRENAICA Hort. Malaceae.

This species is said to be a dwarf evergreen shrub native to the Himalayas.

78554. SPIRAEA HENRYI Hemsl. Rosaceae. **Henry spirea.**

Variety *magnifica*. A spreading deciduous shrub about 7 feet high, with oblong-obovate wedge-shaped leaves usually coarsely dentate toward the apex and up to 2½ inches long, and with small white flowers in loose corymbs. Native to central and western China. This is of the same group as the well-known Anthony Waterer spirea.

78555. SYRINGA JULIANAE C. Schneid. Oleaceae.

A handsome spreading shrub, 6 to 8 feet high, with elliptic-ovate leaves 2 to 3 inches long and numerous panicles of fragrant clear violet flowers which are borne very early in the season. Closely related to *S. velutina*.

78556. SYRINGA KOMAROWI SARGENTIANA C. Schneid. Oleaceae. **Lilac.**

A shrubby lilac up to 15 feet high, native to China, with ovate-lanceolate leaves, 4 to 6 inches long, pubescent beneath, and compact nodding panicles of salmon-rose flowers. It is generally similar to *S. reflexa*.

78557. VIBURNUM BUDDLEIFORIUM C. H. Wright. Caprifoliaceae.

A hairy shrub, native to central China, closely related to *V. veitchii*. It is about 6 feet high, with oblong-lanceolate leaves 3 to 6 inches long, dense clusters, about 3 inches across, of small white flowers, and ovoid black fruits.

For previous introduction see No. 58812.

78558. VIBURNUM HARRYANUM Rehder. Caprifoliaceae.

An evergreen shrub up to 10 feet high, native to western China, with nearly orbicular leaves an inch long, small cymes of white flowers, and ovoid black fruits. The evergreen *V. davidi* is a related species.

For previous introduction see No. 66320.

78559 and 78560. LILIUM spp. Liliaceae. **Lily.**

From Japan. Bulbs obtained by R. K. Beattie, Bureau of Plant Industry. Received January 7, 1929.

78559. LILIUM sp.

No. 800. Collected in Kiraichi Mura, Kita Tsugaru Gun, Aomori Ken, by Morisaburo Sasaki.

78559 and 78560—Continued.

78560. LILIUM sp.

No. 801. December 10, 1928. A lily with light and deep-pink flowers, collected in Nakui, Nakui Mura, San Nohe Gun, Aomori Ken, by Morisaburo Sasaki.

78561 to 78565. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Peru. Seeds obtained from Graham, Rowe & Co., through T. H. Kearney, Bureau of Plant Industry. Received January 3, 1929.

78561. GOSSYPIUM sp.

No. 1.

78562. GOSSYPIUM sp.

No. 2.

78563. GOSSYPIUM sp.

No. 3. The southern or *Ica* variety of the Peruvian tree cotton. Seeds picked from a tree growing in the hacienda San Jose de Ica, which came originally from Nosca, a valley farther inland and to the south.

78564. GOSSYPIUM sp.

No. 4. *Red Peruvian.*

78565. GOSSYPIUM sp.

No. 5. *Stained Peruvian.*

78566. PASPALUM NOTATUM Fluegge. Poaceae. **Bahia grass.**

From Jaguey Grande, Cuba. Seeds purchased from Eugenia Gomez. Received January 7, 1929.

A perennial tropical American grass which has shown promise as a pasture grass in the southern United States. It has very stout rootstocks, makes a firm sod, and does well on sandy as well as on loam soils. The flowering culms and ascending stems attain a height of about 1 foot.

For previous introduction see No. 76433.

78567 to 78569.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 7, 1929.

78567. PICEA GLEHNI (Schmidt) Masters. Pinaceae. **Sakhalin spruce.**

No. 806. Collected by the Ogi Paper Co., of Tomakomai, Hokushu. A handsome Japanese evergreen tree up to 150 feet high, native to northern Japan. The cones are a lustrous brown or violet, and the seeds are said to retain their vitality for seven years.

For previous introduction see No. 78180.

78568. RHODODENDRON sp. Ericaceae. **Azalea.**

No. 795. A white-flowered azalea collected in the front garden of the Red Cross hospital, Aoyama, Tokyo, by Yasuo Kurihara. There was one bloom when the seed pods were picked on November 30, 1928. Mr. Kurihara believes this to be a wild species rather than a cultivated variety.

78569. RHODODENDRON sp. Ericaceae. **Azalea.**

No. 802. An azalea collected in Kiraichi Mura, Kita Tsugaru Gun, Aomori Ken, by Morisaburo Sasaki, November 2, 1928.

78570 to 78573. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Helsingfors, Finland. Seeds presented by Dr. K. Linkola, director of the botanical institute and gardens of the University of Helsingfors. Received January 5, 1929.

Wild varieties.

78570. No. 1.
78571. No. 2.
78572. No. 3.
78573. No. 4.

78574. ARTOCARPUS CHAMPEDEN (Lour.) Spreng. (*A. polyphema* Pers.). Moraceae.

From Singapore, Straits Settlements. Seeds presented by R. E. Holttum, Curator, Botanic Garden. Received January 10, 1929.

A handsome East Indian shade tree bearing small elongated fruits which are rather smooth skinned. The arillus has a peculiar sweet flavor.

For previous introduction see No. 68018.

78575 to 78577. FICUS spp. Moraceae. **Fig.**

From the island of Guam. Seeds presented by C. W. Edwards, Director, Agricultural Experiment Station. Received January 9, 1929.

78575. FICUS MARIANNENSIS Merr.

A tropical plant, native to Guam, which starts as an epiphyte and eventually becomes a tall tree. The alternate, oblong-elliptic, entire leaves are up to about 5 inches long, and the axillary fruits are about two-fifths of an inch in diameter.

For previous introduction see No. 74591.

78576. FICUS PHILIPPINENSIS Miquel.

A climbing woody epiphytic strangling fig, native to the Philippine Islands, which sends down aerial roots and eventually kills the host plant. It has triangular branches, oval-oblong, leathery, long-pointed leaves, and axillary fruits.

For previous introduction see No. 74592.

78577. FICUS sp.

78578 and 78579. QUERCUS CERRIS L. Fagaceae. **European Turkey oak.**

From near Cambridge, England. Plants presented by R. C. B. Gardner. Received January 11, 1929.

78578. An ornamental tree, native to southeastern Europe, up to 100 feet high and 6 feet in diameter, with a broad spreading top, handsome dark-green pinnately lobed leaves which turn brown in the autumn, and slender acorns, 1 to 2 inches long, about half inclosed in a cup with recurved awl-shaped scales.

78579. Variety *laciniata*. Leaves deeply pinnatifid with acute, usually dentate, lobes.

78580 to 78583.

From Paget East, Bermuda. Seeds presented by J. C. Nauen, horticulturist of the agricultural station of the Department of Agriculture. Received January 10, 1929.

78580. CATALPA LONGISSIMA (Jacq.) Sims. Bignoniaceae.

A West Indian timber tree with thin oblong-lanceolate leaves 3 to 6 inches long and terminal panicles of crisped campanulate white flowers.

78581. LEPTOSPERMUM SCOPARIUM Forst. Myrtaceae. **Manuka.**

An evergreen shrub, one of the most abundant in New Zealand, of compact bushy habit, sometimes 30 feet high. The hard, leathery, sharp-pointed leaves are very aromatic, and for this reason they have sometimes been used for making tea. The flowers, borne in great profusion, are white or pink and about three-fourths of an inch across.

For previous introduction see No. 73090.

78582. YUCCA ALOIFOLIA L. Liliaceae.

A West Indian plant with a thick stem 6 to 8 feet high, bearing a crown of daggerlike leaves, spreading above, deflexed below, and a large panicle of waxy white flowers often tinged with purple.

78583. ZEPHYRANTHES ATAMASCO (L.) Herb. Amaryllidaceae. **Atamasco lily.**

A bulbous perennial with bright-green linear leaves a foot long, and a scape, 6 to 12 inches high, bearing a flower 3 inches long, which is usually white, but may have a purplish tinge or be light purple. The flowers usually appear in the spring, but may also appear again in the fall.

78584 to 78588. AVENA SATIVA L. Poaceae. **Oats.**

From Svalöf, Sweden. Seeds presented by the director, Sveriges Utsädesförening, Svalöf. Received January 14, 1929.

78584. *Golden Rain* No. 1.

For previous introduction see No. 77881.

78585. *Golden Rain* No. 2.

For previous introduction see No. 77883.

78586. *Echo.*

For previous introduction see No. 77880.

78587. *Star.*

For previous introduction see No. 77882.

78588. *Viktory.*

For previous introduction see No. 77879.

78589 to 78593. PYRUS spp. Malaceae. **Pear.**

From Fruitland Park, Fla. Scions presented by Louis P. Bosanquet. Received January 17, 1929.

Varieties said to be blight resistant.

78589. PYRUS sp.

Carnes.

78589 to 78593—Continued.

78590. PYRUS sp.

Cincincis.

78591. PYRUS sp.

Hood.

78592. PYRUS sp.

Pineapple.

78593. PYRUS sp.

Shaw.

78594. ALLIUM RETICULATUM Fraser. Liliaceae.

From Vancouver, British Columbia, Canada. Bulblets presented by Prof. John Davidson, department of botany, University of British Columbia. Received January 17, 1929.

A perennial, native to northwestern America, with a fibrous-reticulated bulb, narrow channeled leaves, and scapes, 4 to 8 inches high bearing umbels of white or pinkish flowers.

78595 and 78596. PASSIFLORA spp. Passifloraceae.

From Brazil. Seeds presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria de Minas Geraes. Received January 17, 1929.

78595. PASSIFLORA MACROCARPA Masters.

Collected at Rio Casca, Minas Geraes. An ornamental Brazilian vine producing strongly perfumed fruits which ripen from yellow to orange and have flesh about an inch thick.

78596. PASSIFLORA sp.

Collected on the school grounds. An ornamental Brazilian vine producing fruits about the size of a very large lemon.

78597 to 78600. FICUS spp. Moraceae. Fig.

From Brisbane, Queensland, Australia. Seeds presented by C. T. White, Government botanist, Department of Agriculture and Stock. Received January 17, 1929.

78597. FICUS GRACILIPES F. M. Bailey.

A small semideciduous Australian tree with a drooping habit, coriaceous deep-green elliptical leaves 3 to 5 inches long, and globular deep-purple fruits an inch in diameter that are suitable for preserving.

78598. FICUS HENNEANA Miquel.

An Australian shrub or small tree with coriaceous oblong leaves 3 to 5 inches long and small globular white-mottled fruits less than an inch in diameter.

78599. FICUS PLATYPODA PETIOLARIS Benth.

A small tree, native to Queensland, with thick coriaceous ovate-cordate leaves 4 to 6 inches long and small fruits less than a fourth of an inch long.

78600. FICUS WATKINSIANA F. M. Bailey.

A large glabrous tree, native to Queensland, with light-colored bark, coriaceous lanceolate leaves about 6 inches long, and oblong greenish fruits more than an inch long on thick-angled pedicels.

78601. MIMOSA sp. Mimosaceae.

From Trinidad, British West Indies. Seeds presented by H. Caracciolo. Received January 11, 1929.

Sensitive tree from Trinidad.

78602. CINCHONA LEDGERIANA Moens. Rubiaceae.

From Munsong, Kalimpong, Bengal, India. Seeds purchased from H. Thomas, manager of the Government cinchona plantation. Received January 18, 1929.

A tree, native to the Andes, yielding a bark remarkably rich in quinine which crystalizes readily as quinine sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that. This tree is suitable for cultivation only on hillsides in frost-free regions.

For previous introduction see No. 60292.

78603. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

From Viçosa, Minas Geraes, Brazil. Plants presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria do Estado de Minas Geraes, through Dr. W. A. Orton, Director and General Manager, Tropical Plant Research Foundation, Washington, D. C. Received January 7, 1929.

Laranja hanceta doce.

78604. COLVILLEA RACEMOSA Boj. Caesalpiniaceae.

From Trinidad, British West Indies. Seeds presented by W. G. Freeman, Director, Department of Agriculture. Received January 9, 1929.

This handsome tropical tree, believed to be native to east Africa, should be tested in southern Florida along with the poinciana, to which it is related. It is said to reach 40 or 50 feet in height. The pinnate leaves are 3 feet long, and the brilliant scarlet, curiously shaped flowers are borne in drooping racemes more than a foot long. The tree was named for Sir Charles Colville, Governor of Mauritius; it was discovered in 1824 on the west coast of Madagascar, where it flowers in April or May. In all probability it will stand no more frost than the poinciana. Like most other leguminous trees, it is readily propagated from seeds.

For previous introduction see No. 66504.

78605 to 78608.

From Manchuria, China. Seeds presented by V. K. Boerich, through V. Golubzoff, Harbin, Manchuria. Received January 17, 1929.

78605. LILIUM DAURICUM Ker. Liliaceae. **Candlestick lily.**

Collected at Guliusutai, between the valleys of the Rivers Gan and Derbul.

For previous introduction see No. 75772.

78606. LILIUM sp. Liliaceae. **Lily.**

Collected in the Hukunbuir district in the valleys of the Gan and Derbul Rivers. The bulbs are eaten raw or boiled; Russian peasants of Transbaikalia mix these bulbs with millet and cook the whole into a gruel.

78605 to 78608—Continued.

78607. PAEONIA ALBIFLORA Pall. Ranunculaceae. **Chinese peony.**

An ornamental herbaceous perennial 2 to 3 feet high with white flowers. Native to China.

For previous introduction see No. 73195.

78608. TRIFOLIUM LUPINASTER L. Fabaceae. **Clover.**

A Siberian clover with five leaflets like a lupine leaf.

78609. SARACA CAULIFLORA Baker. Caesalpiniaceae.

From Bangalore, India. Seeds presented by the Superintendent of the Government Botanic Gardens. Received January 31, 1929.

A shrubby Indian tree with abruptly pinnate leaves of 10 to 12 thick rigid oblong to oblanceolate leaflets 6 inches to a foot long, and corymbs, 4 to 6 inches broad, of scarlet flowers.

78610 to 78615.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 23, 1929.

78610. CASTANOPSIS sp. Fagaceae. **Evergreen chinquapin.**

No. 807. From the Tanushimaru Nursery Association, Ukiha Gun, Fukuoka Ken, originally collected at Mininoyama. The Japanese local name is Ichishihi.

78611. CASTANOPSIS sp. Fagaceae. **Evergreen chinquapin.**

No. 808. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan.

78612 to 78615. QUERCUS spp. Fagaceae. **Oak.**

78612. QUERCUS CASTANOPSIFOLIA Hayata.

No. 812. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan. A subtropical oak, related to *Quercus lepidocarpa,* native to Taiwan. The rather thin oblong-lanceolate leaves, dull green above, paler beneath, are about 10 inches long, and the acorns are globose depressed.

78613. QUERCUS KONISHII Hayata.

No. 809. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan. An oak from the mountainous regions of Taiwan, with elliptic-oblong acuminate leaves 3 inches long and small hemispherical acorns half an inch across. It is said to be a distinct species with no closely related forms.

78614. QUERCUS MIYAGII Koidz.

Nos. 811 and 813. From the Okinawa Eirinsho, Luchu Islands, and originally collected at Yasunami, Kokuzu Mura, Kokuzu Gun, Okinawa Ken. A large erect tree, 40 feet high, with dense foliage. The leathery ovate-lanceolate leaves are 4 to 5 inches long, and the globose-ovoid acorns are about an inch in diameter. It is native to the Luchu Islands.

78615. QUERCUS TOMENTOSICUPULA Hayata.

No. 810. From the Rengechi Forest Experiment Station, Taichu Province, Taiwan. An oak, native to Taiwan, with stiff leathery oblong-lanceolate leaves 4 inches long, somewhat serrate, and broadly campanulate cups 1½ inches across. It is related to *Quercus edithae,* but has much smaller acorns.

78616. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

From Jaffna, Ceylon. Seeds presented by W. P. A. Cooke, Division Agricultural Officer, Department of Agriculture. Received January 24, 1929.

The famous Palmyra palm of India and Ceylon which in the northern part of this island takes the place of the cocoanut palm. Though a slower grower, it is a very handsome palm when old. Inasmuch as it grows in the dry coastal regions of Ceylon, is apparently able to withstand any amount of lime, and is said to have been used successfully as a binder for sand dunes, it should prove of real value in the calcareous soils of southern Florida. In the number of uses to which it is put here it rivals the coconut. A delicate sugar is made from the sap which flows in abundance from its inflorescence when cut. The seeds are germinated and the young subterranean hypocotyl is used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance and when ripe exhales a delicate fragrance. The hull is eaten by the Tamils of Ceylon.

For previous introduction see No. 74590.

78617 to 78663.

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 2, 1929.

78617 to 78649. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

Unless otherwise stated, these are selections from wild trees.

78617. No. 737. Collected in the Oshika Mago National Forest.

78618. No. 738. Collected in the Juni Sho Saruma Tozawa National Forest, Akita Gun, Akita Ken.

78619. No. 739. Presented by Morisaburo Sasaki, from Taizen, Akaishi Mura, Niski Tsugaru Gun, Aomori Ken.

78620. No. 740. Collected in Takizawa, Takizawa Mura, Iwate Gun, Iwate Ken.

78621. No. 741. Collected in the Etsunagi Public Forest, Kokuni Mura, Shimo Hei Gun, Iwate Ken.

78622. No. 742. Collected in the Yamaura Kwonita National Forest, Iwato Mura, Nishi Usuki Gun, Miyazaka Ken.

78623. No. 744. Obtained from Shon Shimyung, at Kal Huyngri, north of Giseifu, east of Keijo, Chosen. The nuts are large and of the orchard rather than the forest type.

78624. No. 745. Obtained from the Shunrin Co., Giseifu, east of Keijo, Chosen.

78625. No. 746. Obtained at Dukehung, east of Giseifu, near Keijo, Chosen.

78617 to 78663—Continued.

78626. No. 748. Collected at Oguriyama, Chitose Mura, Naka Tsugaru Gun, Aomori Ken.

78627. No. 749. Collected in the Hisashi Hoden Osawayama National Forest, Hisashi Oguni Mura, Mogami Gun, Yamagata Ken.

78628. No. 750. Collected at Ota Public Genya (prairie), Hachimau Mura, Kusu Gun, Oita Ken. It is called locally Sasa guri, and Mr. Ikebe, Director of the Bureau of Utilization of Forest Products, states that it probably never grows very large, and usually grows on prairies where fire often sweeps through the scattered stands.

78629. No. 751. Collected in the Oshika Mago National Forest.

78630. No. 752. Collected in the Tamba Ashio University Forest.

78631. No. 753. Collected in the Yakunai National Forest, Akinomiya Mura, Okatsu Gun, Akita Ken.

78632. No. 754. From the forest of reforestation project 19 Rin Pan.

78633. No. 755. Collected at Noboribetsu Horobetsu Gun, Hokushu, by Bunsaburo Ishida, Botanic Garden, Hokushu University, Sapporo.

78634. No. 756. Collected at Makoma Nai, near Sapporo, Hokushu.

78635. No. 757. Collected at Atsubetsu, Hokushu.

78636. No. 758. Presented by Shintaro Kondo, Kamiteine, Teine Mura, Sapporo Gun, Hokushu.

78637. No. 760. Collected at Nakiu Dake, Kaminakui, Nakui Mura, Sannohe Gun, Aomori Ken.

78638. No. 761. Collected in the Ushioku Yama Provincial Forest, Okunodamura Ushioku, Higashi Yaminashi Gun, Yamanashi Ken.

78639. No. 763. Collected at the Poroto Forest Reserve, Shiraoi Mura, Shiraoi Gun, Iburi, Hokushu.

78640. No. 764. Presented by the Hamamachi Eirinsho, Kuma Moto Ken.

78641. No. 766½. Collected in the Kyoto University Forest, Wakayama Ken.

78642. No. 766½ B. Collected in the Kyoto University Forest, Wakayama Ken.

78643. No. 767½. Collected at Shikifu, near Shiraoi station, Shiraoi Mura, Shiraoi Gun, Iburi Province, Hokushu.

78644. No. 768. From the largest chestnut trees in Chosen at the Koryo Forest Experiment Station, east of Keijo.

78645. No. 768½. Collected northeast of Shiraoi, Shiraoi Mura, Shiraoi Gun, Iburi Province, Hokushu.

78646. No. 769. Collected at Chidoko, northeast of Shiraoi, Shiraoi Mura, Shiraoi Gun, Iburi Province, Hokushu.

78647. No. 770. Collected in the Ushioku Yama Provincial Forest, Okunodamura Ushioku, Higashi Yaminashi Gun, Yaminashi Ken.

78617 to 78663—Continued.

78648. No. 771. Collected in Ukiha Gun, Fukuoka Ken.

78649. No. 772. Collected at Ukiha Gun, Fukuoka Ken.

78650 to 78653. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

78650. No. 762. From Hamjong, Chosen. Trees of orchard type and of various ages, up to 15 inches in diameter and not more than 25 feet high, but held back by crude pruning.

78651. No. 765. *Song chung.* A cultivated variety obtained in the market at Heijo, Chosen, and said to have come from An Taik Ri, northeast of Heijo, October 20, 1928.

78652. No. 766. *Duk chung.* A cultivated variety obtained in the market at Heijo, Chosen, October 20, 1928.

78653. No. 767. *Sarinjo.* A cultivated variety obtained in the market at Heijo, Chosen, October 20, 1928, and said to have come from Sunchung, north of Heijo.

78654. CASTANOPSIS CUSPIDATA (Thunb.) Schottky. Fagaceae. **Japanese chinquapin.**

No. 804. *Shihi.* Obtained at Yoshida, Tajima Mura, Munnehata Gun, Fukuoka Ken, from Gengoro Ono, of the Fukuoka Eirinsho, November, 1928.

For previous introduction and description see No. 78514.

78655. LITHOCARPUS EDULIS (Makino) Rehder. Fagaceae.

No. 803. *Matebashihi.* Obtained at Shinokura Machi, Kasuya Gun, Fukuoka Ken, from Gengoro Ono, of the Fukuoka Eirinsho, November, 1928. An evergreen tree, native to Japan, with ovate-oblong short-pointed entire leaves 3 to 7 inches long and oblong-ovoid acorns an inch long in very shallow cups.

78656. LITHOCARPUS sp.

No. 805. *Komeji.* Obtained at Tanushi Maru, Ukiha Gun, Fukuoka Ken, from the Ukiha Gun Nursery Association, November, 1928.

78657 to 78663. QUERCUS spp. Fagaceae. **Oak.**

78657. QUERCUS ACUTA Thunb. **Japanese evergreen oak.**

No. 797. December, 1928. *Aka gashi.* From the Tokyo University Chiba Ken Forest. A small evergreen tree, native to Japan, with oblong undulate-margined leaves 3 to 6 inches long and pubescent acorn cups with the scales arranged in concentric rings.

For previous introduction see No. 78165.

78658. QUERCUS ACUTISSIMA Carruthers. **Bristletooth oak.**

No. 747. October, 1928. Obtained at Duk Chung, east of Keijo, Chosen. A handsome hardy tree up to 50 feet high, with half-evergreen obovate to oblong sharp-pointed leaves, 5 to 7 inches long, having serrate bristle-pointed margins. The cup, which covers about two-thirds of the acorn, has long-spreading recurved scales. Native to northeastern Asia.

For previous introduction see No. 76752.

78617 to 78663—Continued.

78659. QUERCUS DENTATA Thunb.
Daimyo oak.

No. 759. *Kashiwa.* Collected at Shimo Teine, Teine Mura, Sapporo Gun, Hokushu. A large tree, native to Chosen and northern and western China, 75 to 80 feet tall. The obovate-sinuate lobed leaves, dark green above and grayish tomentose beneath, are 10 to 12 inches long and 9 inches wide, and the ovoid acorns, an inch wide, are about half covered by the cup which has lanceolate spreading scales.

For previous introduction see No. 76753.

78660. QUERCUS GLAUCA Thunb.
Blue Japanese oak.

No. 799. *Ara gashi.* December, 1928. From the Tokyo University Chiba Ken Forest. A handsome evergreen tree, native to Japan, 45 feet high, with ovate-dentate leaves 3 to 5 inches long, lustrous above and glaucous beneath. The ellipsoid acorns, nearly an inch long with saucer-shaped cups, have five to seven concentric silky pubscent rings.

For previous introduction see No. 76754.

78661. QUERCUS MONGOLICA GROSSESERRATA (Blume) Rehd. and Wils.

No. 743. *Nara, mizunara.* Collected in the Yamaura Kwonita National Forest, Iwato Mura, Nishi Usuki Gun, Miyazaki Ken. This oak is said to be the most important forest tree of Japan, attaining a height of 100 feet and a girth of 12 feet. The wood is durable and for a hardwood easily worked, approximating for furniture the best European and American oaks.

For previous introduction see No. 76478.

78662. QUERCUS MYRSINAEFOLIA Blume.

No. 798. *Shira gashi.* December, 1928. From the Tokyo University Chiba Ken Forest. A handsome evergreen oak, native to Japan, 30 to 40 feet high, with lanceolate-serrate leaves, 3 to 5 inches long, smooth and shining above and covered with a whitish bloom underneath. The ovoid acorns, nearly an inch long and one-third covered by the smooth cup, are borne in short spikes.

For previous introduction see No. 78166.

78663. QUERCUS STENOPHYLLA (Blume) Makino.

No. 796. *Urajiro gashi.* December, 1928. From the Tokyo University Chiba Ken Forest. An oak, native to Japan, with narrowly lanceloate long-pointed leaves 2 to 6 inches long.

For previous introduction see No. 78321.

78664 to 78671. ACACIA spp. Mimosaceae.

From Dundas, New South Wales, Australia. Seeds presented by Herbert J. Rumsey, through John McLaren, Superintendent of the Golden Gate Park, San Francisco, Calif. Received January 15, 1929.

78664. ACACIA ASPARAGOIDES A. Cunn.

78664 to 78671—Continued.

A glabrous rigid Australian shrub with nearly terete branches, thick rigid spreading linear sharp-pointed phyllodes nearly an inch long, and solitary globular heads of small flowers.

78665. ACACIA BAKERI Maiden.

A large forest tree of New South Wales, up to 160 feet high, with sessile, broadly lanceolate phyllodes about 4 inches long and pale-yellow flowers in loose panicles.

78666. ACACIA DECURRENS PAUCIGLANDULOSA F. Muell.

A form of the green wattle with fewer glands on the petioles and with softer pubescence than the usual form.

For previous introduction see No. 75585.

78667. ACACIA ELONGATA Sieber.

A tall handsome shrub with drooping angular branchlets, linear falcate 3-nerved phyllodes 4 to 6 inches long, and globose heads of yellow flowers. Native to Australia.

For previous introduction see No. 48042.

78668. ACACIA HETEROCLITA Meissn.

A small erect shrub 3 to 4 feet high, native to Western Australia, with the young shoots minutely pubescent, linear to lanceolate sharp-pointed phyllodes 2 to 3 inches long, and globular heads of small flowers.

78669. ACACIA PUBESCENS R. Br.
Hairy wattle.

The branches and leaf stems of this Australian shrub are covered with spreading hairs. The compound leaves are made up of 3 to 10 pairs of branches each bearing 6 to 20 pairs of small linear leaflets. The small flower heads are in slender racemes gathered into large panicles at the ends of the branches.

78670. ACACIA SUAVEOLENS (J. E. Smith) Willd.

An Australian shrub up to 6 feet high, with linear to lanceolate phyllodes and small heads of yellow flowers in axillary racemes.

For previous introduction see No. 75609.

78671. ACACIA TRINERVATA Sieber.

A tall shrub, native to New South Wales, with angular branches, thick rigid spreading linear phyllodes an inch long, and solitary heads of numerous small flowers.

78672. PSIDIUM GUAJAVA L. Myrtaceae.
Guava.

From Papeite, Tahiti, Society Islands. Seeds obtained from Marcel Frogier, through Gerrit P. Wilder, Honolulu, Hawaii. Received January 23, 1929.

A variety which is considered the finest of the cultivated guavas. The fruits vary in size from 2 to 3½ inches in diameter, with pale yellowish white skin dotted with fine red spots and solid white flesh with small seeds.

For previous introduction see No. 76015.

78673 and 78674.

From Boloven Plateau, Laos, French Indo-China. Fruits presented by G. Ricau, Botanic Garden. Received January 25, 1929.

78673. MALUS sp. Malaceae. **Apple.**

An apple tree about 25 feet high, growing in red soil in forests at an altitude of about 1,300 feet.

78674. PYRUS sp. Malaceae. **Pear.**

A semiaquatic pear which is said to grow in shallow water part of the year, at an altitude between 2,500 and 4,000 feet.

78675. VITIS sp. Vitaceae. **Grape.**

From Tsinan, Shantung, China. Cuttings presented by Dr. Philip S. Evans, jr., Shantung Christian University. Received January 29, 1929.

A grape which fruits through the late summer and autumn. The first bunches ripen in August when only about half the bunches are half grown and there are many blossoms as well. It resembles the Niagara, although it often has an elongated shape. This grape, which is not unusual in quality, has a rather thick skin and a slight spicy flavor.

78676 to 78685.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received January 19, 1929.

78676. CALLITRIS QUADRIVALVIS Vent. Pinaceae. **Arar-tree.**

An evergreen shrub or small tree somewhat like Cupressus in habit, native to the mountains in northern Africa, with hard durable fragrant wood, spreading jointed branches, very small flattened leaves, and 4-sided cones.

78677. DANAE RACEMOSA (L.) Moench. (*Ruscus racemosus* L.). Convallariaceae. **Alexandrian laurel.**

A much-branched evergreen Persian shrub 3 to 4 feet high, with alternate lanceolate leaflike cladodes 4 inches long, terminal racemes of small white flowers, and globose red berries.

78678. DAPHNE GNIDIUM L. Thymelaeaceae.

An evergreen shrub 2 feet high, native to southern Europe, with linear-lanceolate glabrous leaves and terminal clusters of yellowish-white fragrant flowers.

78679 to 78682. ERICA spp. Ericaceae. **Heath.**

78679. ERICA ARBOREA L.

An evergreen shrub or small tree up to 20 feet high, native to the Mediterranean region, with small glabrous leaves and large pyramidal panicles of fragrant nearly white flowers.

78680. ERICA CINEREA L. **Twisted heath.**

An evergreen European shrub 1 to 2 feet high, with very small lustrous linear leaves and umbels or terminal racemes of bell-shaped rosy purple flowers.

78681. ERICA SCOPARIA L. **Besom heath.**

An evergreen southern European shrub 10 feet high, with upright

78676 to 78685—Continued.

branches, small lustrous dark-green linear leaves in whorls of three or four, and long cylindrical spikes of greenish-white flowers.

78682. ERICA sp.

A mixture of various species of Erica from southern Africa, which are shrubs with small leaves and racemes of white, rosy, or yellow flowers.

78683. MERATIA PRAECOX GRANDIFLORA (Lindl.) Rehd. and Wils. Calycanthaceae. **Wintersweet.**

A variety with much larger and brighter colored flowers than the usual form, which is a Chinese shrub up to 10 feet high with ovate leaves 6 to 10 inches long and producing yellow flowers an inch across striped with purplish brown and opening in mild seasons throughout the winter.

78684. RUSCUS ACULEATUS L. Convallariaceae. **Butchersbroom.**

A rigid evergreen European shrub 2 to 4 feet high, with grooved branching stems and dark-green ovate leaflike cladodes over an inch long bearing one or two small white flowers in the middle of the upper surface, which are followed by globose or ovoid bright-red berries nearly half an inch in diameter.

78685. SKIMMIA JAPONICA Thunb. (*S. oblata* T. Moore). Rutaceae. **Japanese skimmia.**

A dense evergreen Japanese shrub 3 to 5 feet high, with yellowish-green leaves 6 inches long crowded at the ends of the branchlets, panicles of small yellowish-white flowers, and bright-red berries a quarter of an inch through.

78686 to 78696.

From Vancouver, British Columbia, Canada. Seeds presented by Prof. John Davidson, department of botany, University of British Columbia. Received January 17, 1929.

78686. ALLIUM WATSONI Howell. Liliaceae. **Onion.**

A low bulbous plant, native to northwestern North America, with a slender narrowly margined scape 3 inches high, linear leaves 6 inches long, and a dense umbel of rose-colored flowers.

78687 to 78689. ERYTHRONIUM spp. Liliaceae.

78687. ERYTHRONIUM GRANDIFLORUM Pursh. **Glacierlily.**

A herbaceous perennial, native to northwestern North America, with an erect bulb, two broadly lanceolate plain green leaves 6 inches long, and a scape 1 to 2 feet high bearing three to five bright-yellow flowers with recurved segments and purple anthers.

78688. ERYTHRONIUM GRANDIFLORUM ALBIFLORUM Hook. **Troutlily.**

A herbaceous perennial, native to northwestern North America, with the two leaves mottled in white and brown; the recurved segments of the flower are creamy white.

78689. ERYTHRONIUM GRANDIFLORUM PARVIFLORUM S. Wats.

A herbaceous perennial, native to northwestern North America, with

78686 to 78696—Continued.

broadly lanceolate plain leaves and bright-yellow flowers with white anthers.

78690. LILIUM PARVIFLORUM (Hook.) Holzinger. Liliaceae. **Panther lily.**

This lily, native to northwestern North America, closely resembles the leopard lily, *L. pardalinum*, but the flowers, of the same bright yellow with purplish spots, are smaller and are usually solitary or only two or three together.

78691 to 78695. PENTSTEMON spp. Scrophulariaceae. **Beardtongue.**

78691. PENTSTEMON CONFERTUS Douglas.

A herbaceous perennial, 2 feet high, native to Oregon and northern California, with nearly entire lanceolate to linear leaves and a narrow interrupted spike of cream-white to sulphur-yellow flowers.

78692. PENTSTEMON CONFERTUS CAERULEO-PURPUREUS A. Gray.

A variety of the preceding with flowers blue-purple to violet.

78693. PENTSTEMON DIFFUSUS Douglas.

A herbaceous perennial, native to northwestern North America, with diffuse stems 2 feet high, lanceolate to cordate-ovate deeply serrate leaves, and a leafy cluster of light-purple 2-lipped flowers.

78694. PENTSTEMON MENZIESII Hook.

A herbaceous perennial with a woody base, native to Washington and British Columbia. The stems are less than a foot high, the thick leaves are obovate, and the violet-blue to purple flowers, an inch long, are borne in a spreading raceme.

78695. PENTSTEMON OVATUS Douglas.

A herbaceous perennial, native to northwestern North America, with a slender but erect stem 4 feet high, ovate thin serrate bright-green leaves, and lax clusters of 2-lipped blue flowers changing to purple.

78696. SISYRINCHIUM CALIFORNICUM Ait. Iridaceae.

A herbaceous perennial with linear leaves a foot long, a leafless broadly winged stem, 1½ feet high, with a cluster of three to six brown-lined yellow flowers half an inch long. Native to California.

78697 to 78743.

From Deli Valley, Mishmi Hills, Assam, India. Seeds collected by Capt. F. Kingdon Ward and presented by Maj. Lionel de Rothschild, London, England. Received January 19, 1929.

78697. ABELIA sp. Caprifoliaceae.

No. 8180. May 8, 1928. *Golden Abelia.* A small shrub with long, drooping racemes of bright-yellow flowers. Only one plant was found in the dense thickets on sheltered cliffs at an altitude of 6,000 feet.

78698. ACONITUM sp. Ranunculaceae. **Aconite.**

No. 8724. October 1, 1928. An ornamental herbaceous perennial, 2 to 4 feet high, growing on alpine meadow slopes at an altitude of 12,000 feet.

78697 to 78743—Continued.

78699. ANDROSACE sp. Primulaceae.

No. 8565. August 23, 1928. A small herbaceous perennial resembling *Androsace henryi*, 6 inches high, bearing large many-flowered heads. It grows in dense undergrowth on the banks of gullies in the middle of the rain forest, above an altitude of 10,000 feet.

78700. ARISAEMA sp. Araceae.

No. 8085. April 12, 1928. A large herbaceous perennial closely related to the Indian turnip, with papery, colorless spathes which are striped with purple. It grows in the temperate rain forest at an altitude of 7,000 feet.

78701. BUDDLEIA sp. Loganaceae.

No. 8559. August 23, 1928. A floppy undershrub, 2 to 3 feet high, growing on steep, well-shaded slopes, among bamboos or in gullies among subalpine flowers, at an altitude of 11,000 feet. The leaves are very large, and the fragrant flowers are cream white with orange centers.

78702. CALTHA sp. Ranunculaceae.

No. 8616. August 28, 1928. A herbaceous perennial about a foot high, with an abundance of magenta flowers. It grows in alpine gullies and on alpine meadow slopes at an altitude between 11,000 and 12,000 feet.

78703. BRYOCARPUM HIMALAICUM Hook. f. and Thoms. Primulaceae.

No. 8236. May 23, 1928. A herbaceous perennial about 2 feet high, with solitary nodding yellow flowers which appear before the large leaves. It grows under bamboos or in an Abies forest, on steep slopes, at altitudes between 10,000 and 11,000 feet.

For previous introduction see No. 41417.

78704. DICENTRA sp. Papaveraceae.

No. 8649. September 17, 1928. An annual climbing vine with sea-green leaves and bunches of yellow flowers, borne in the autumn, which are followed by red, pear-shaped fruits. It grows in the forest at an altitude between 8,000 and 9,000 feet.

78705. GAULTHERIA sp. Eriaceae.

No. 8725. October 26, 1928. A shrub 3 to 6 feet high, with crowded spikes of white flowers and an abundance of black berries which have a white bloom. It grows on open, grass-clad slopes along the edge of the forest at altitudes between 6,000 and 7,000 feet.

78706. HEDYCHIUM sp. Zinziberaceae.

No. 8483. July 24, 1928. A strong-growing herbaceous perennial, 2 feet high, with purplish leaves and white flowers from a creeping rhizome. It grows at an altitude of 6,000 feet.

78707. HYPERICUM sp. Hypericaceae.

No. 8444. July 12, 1928. An ornamental shrub, with an abundance of small bright-yellow flowers, growing in open stony pastures near cultivated land at an altitude of 5,000 feet.

78708. LYSIMACHIA sp. (*Nummularia* sp.). Primulaceae.

No. 8574. August 23, 1928. A semi-erect herbaceous perennial nearly a foot high, bearing an abundance of yellow

78697 to 78743—Continued.

flowers up the leafy stems. It is a good rock-garden plant, with a prolonged flowering period, and is found on rocks and banks in deep gullies, keeping as much as possible in the open, but not intolerant of shade.

78709. NOMOCHARIS sp. Liliaceae.

No. 8370. June 26, 1928. A lily-like perennial about a foot high, bearing, during June, solitary nodding dull-red flowers. It is found on alpine meadow slopes, in tenacious loam, and also under bamboos, at an altitude of 12,000 feet.

78710 to 78713. PRIMULA spp. Primulaceae. **Primrose.**

78710. PRIMULA PRENANTHA Balf. and Smith.

No. 8262. May 21, 1928. A herbaceous perennial, with small light-yellow flowers, growing on subalpine grass slopes where bamboos give shelter, at an altitude of 11,000 feet.

78711. PRIMULA sp.

No. 8282. June 4, 1928. A bright yellow-flowered herbaceous perennial, about a foot high, with leaves covered with cream-colored meal. It is found from the upper Abies forest to the alpine region, between 12,000 and 13,000 feet altitude, where it grows in black loam among bowlders or scrub rhododendrons.

78712. PRIMULA sp.

No. 8295. June 5, 1928. A herbaceous perennial with leaves often turning scarlet in the autumn and large compact heads of faintly fragrant, bright purplish-rose flowers which have a yellow or crimson eye. It is a rather massive perennial bearing an abundance of foliage from which rise as many as half a dozen scapes. It grows in steep rocky gullies in the Tsuga and Rhododendron forest, at an altitude of 10,000 feet, and requires deep shade and an abundance of water.

78713. PRIMULA sp.

No. 8406. July 2, 1928. A herbaceous perennial, 6 inches high, which is a hairy and not very mealy alpine species scattered widely over the turf slopes at an altitude of 12,000 feet. It bears small heads of fragrant violet flowers.

78714 to 78737. RHODODENDRON spp. Ericaceae.

78714. RHODODENDRON sp.

No. 8045. April 11, 1928. A small smooth-barked forest tree with very large leaves and pink-flushed buds which become large white fragrant flowers. It grows at altitudes between 6,000 and 7,000 feet.

78715. RHODODENDRON sp.

No. 8052. April 11, 1928. A species found at an altitude between 7,000 and 8,000 feet, bearing white fragrant flowers, banded with rose-purple on the reverse side, during March and April. It is like *Rhododendron bullatum*.

78716. RHODODENDRON sp.

No. 8069. April 11, 1928. A large tree of the rain forest, growing at an altitude between 8,000 and 9,000 feet, with leaves which are silvery beneath.

78697 to 78743—Continued.

78717. RHODODENDRON sp.

No. 8101. April 20, 1928. A small evergreen bushy shrub with masses of butter-yellow flowers. It grows in thickets, but enjoys full exposure. The flowers are paler than those of *Rhododendron aureum*, but it is a much better-looking shrub.

78718. RHODODENDRON sp.

No. 8113. April 22, 1928. A small rather lanky or scraggy shrub growing on rock outcrops and cliffs, or epiphytically, and in shady places it is more compact. The flowers, in trusses of four to six, are fairly large and brilliant crocus yellow. This shrub is found at an altitude between 7,000 and 8,000 feet.

78719. RHODODENDRON sp.

No. 8130. April 24, 1928. A fine gnarled tree with huge leaves characterized by a bright-yellow midrib and immense trusses of cream flowers. It is found at an altitude between 8,000 and 9,000 feet.

78720. RHODODENDRON sp.

No. 8163. May 5, 1928. A spreading gnarled medium-sized tree with leaves which are cinnamon-colored felt beneath and silver white above when young and big trusses of cream flowers. It is found at an altitude of 9,000 feet.

78721. RHODODENDRON sp.

No. 8165. May 5, 1928. A small shrub abundant on open rock ridges and in thickets, with bright-purple flowers in loose trusses of six to nine. It recalls *Rhododendron tephropeplum*, but has more and larger flowers in the truss. It grows at an altitude between 8,000 and 9,000 feet.

78722. RHODODENDRON sp.

No. 8203. May 19, 1928. A small gnarled smooth-barked tree growing at an altitude between 9,000 and 10,000 feet. The small purple flowers with dark spots are in large trusses.

78723. RHODODENDRON sp.

No. 8206. May 19, 1928. A small shrub, usually high up on Tsuga or Abies trees, and sometimes found on rocks, at altitudes between 9,000 and 10,000 feet. The large flowers are solitary or more usually in two's, and rarely in three's. They are white, flushed rose-purple on the reverse, and very fragrant. It is one of the most beautiful species and is probably fairly hardy. The highest specimens do not flower until June.

78724. RHODODENDRON sp.

No. 8208. May 19, 1928. A small or large bush bearing during June and July flame-colored, narrow tubular flowers in large aggregate bunches of axillary trusses.

78725. RHODODENDRON sp.

No. 8225. May 22, 1928. An epiphyte growing in the Abies forest at an altitude between 10,000 and 12,000 feet. The leaves are bright silver beneath, and the bright-yellow flowers are in pairs.

78697 to 78743—Continued.

78726. RHODODENDRON sp.

No. 8250. May 30, 1928. A bushy shrub with handsome young foliage and persistent leaf bud scales which are cherry red. The leaves are large, and the bright brick-red flowers are in large compact trusses. It is scattered in thickets at an altitude of 11,000 feet.

78727. RHODODENDRON sp.

No. 8251. May 30, 1928. A fair-sized tree with leaves woolly white beneath and large trusses of rose-purple flowers. It grows in the Abies forest and in thickets at an altitude of 11,000 feet.

78728. RHODODENDRON sp.

No. 8256. June 4, 1928. A species with glaucous leaves and pale-yellow flowers with a crimson flush at the base. It grows in dense thickets in the alpine region at an altitude between 12,000 and 13,000 feet.

78729. RHODODENDRON sp.

No. 8257. June 10, 1928. A small, aromatic bushy shrub growing in thickets on the edge of the alpine region, at altitudes between 11,000 and 12,000 feet. The leaves are whitened beneath, and the dull plum-purple flowers are in loose umbels.

78730. RHODODENDRON sp.

No. 8258. May 30, 1928. A bush with an ascending trunk and loose umbels of bright crimson-scarlet flowers which have coal-black glands at the base. It grows in the Abies forest, along the ridge, at an altitude of 12,000 feet.

78731. RHODODENDRON sp.

No. 8259. May 30, 1928. A small bush with yellowish flowers which appear before the leaves. It is found on alpine meadow slopes at an altitude of 12,000 feet.

78732. RHODODENDRON sp.

No. 8288. June 4, 1928. A shrub, 3 to 5 feet high, forming much of the scrub on the northern slopes in this alpine region at altitudes between 12,000 and 13,000 feet. The small leaves are dark green above and rust red beneath, and the cream-colored flowers, sometimes flushed with pink, are heavily speckled rose purple.

78733. RHODODENDRON sp.

No. 8300. June 6, 1928. A small tree growing in the Tsuga and Rhododendron forest at an altitude of 10,000 feet. The leaves have a very thin closely woven rust-red felt, and the fairly large trusses of flowers are probably purple.

78734. RHODODENDRON sp.

No. 8326. June 14, 1928. A small epiphytic undershrub with tiny sickly yellow flowers. The previous year's leaves probably turn bright scarlet in the autumn, as also do the fruits. It grows in the rain forest at altitudes between 10,000 and 11,000 feet.

78735. RHODODENDRON sp.

No. 8522. August 15, 1928. A lanky shrub 6 to 8 feet high in the shade, but it is more common in the open, on gneiss rocks, where it is a compact shrublet 1 to 2 feet high. It grows at altitudes between 7,000 and 8,000 feet.

78736. RHODODENDRON sp.

No. 8545. August 20, 1928. A rather late-flowering species growing on exposed ridges facing south, where it is a small shrub. It is found at an altitude of 8,000 feet.

78737. RHODODENDRON sp.

No. 8546. August 20, 1928. A small slim shrub, sometimes 10 to 12 feet high, growing in thickets and among scrub on the southern slope, at an altitude of 9,000 feet.

78738. ROSA sp. Rosaceae. **Rose.**

No. 8626. September 2, 1928. A small shrub with smooth scarlet fruits, scattered in the Abies and Rhododendron forest at an altitude of 11,000 feet.

78739. ROSA sp. Rosaceae. **Rose.**

No. 8681. October 1, 1928. A dwarf very spiny undershrub growing on alpine slopes at an altitude of 12,000 feet. The smooth, red, flask-shaped fruits are smaller than those of No. 8626 (No. 78738).

78740. SCHEFFLERA sp. (*Heptapleurum* sp.). Araliaceae.

No. 8652. September 19, 1928. A moderate-sized palmlike tree, 20 feet high, usually much branched at the top, with large shining green, digitate leaves, long spikes of fragrant cream-colored flowers, and black fruits. It grows in the lower rain forest at an altitude of 7,000 feet.

78741. SCHIZANDRA sp. Magnoliaceae.

No. 8665. September 22, 1928. A large woody climber with scarlet fruits on pedicels 6 inches long. It grows in the forest at an altitude of 10,000 feet.

78742. VIOLA sp. Violaceae. **Violet.**

No. 8563. August 23, 1928. A species, with unusual foliage growing on earth banks in the middle forest, where there is no sun, at altitudes between 9,000 and 10,000 feet.

78743. (Undetermined.)

No. 8096. April 17, 1928. A small tree with masses of intensely fragrant yellowish flowers. It is scattered in the lower rain forest at altitudes between 4,000 and 5,000 feet.

78744. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Fa Hua Ssu Temple, near Peiping, Hopei, China. Seeds obtained through Peter Liu, Peiping. Received January 29, 1929.

Tiger paw chestnut.

For previous introduction see No. 76087.

78745. HIBISCUS SABDARIFFA L. Malvaceae. **Roselle.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received January 30, 1929.

Rizal. A distinctive and attractive variety, with waxy pink calyxes, which originated at Novaliches, Rizal, and is apparently a spontaneous hybrid between the Victor, a red, and Archer, a white variety.

78746. EULALIA FULVA (R. Br.) Kuntze (*Pollinia fulva* Benth.). Poaceae. **Sugar grass.**

From Sydney, New South Wales, Australia. Seeds presented by G. D. Ross, Undersecretary, Department of Agriculture. Received January 28, 1929.

A fine-stemmed leafy grass, 3 feet high, native to Australia. It is said to be drought resistant and of good seeding habit. Because of its flavor it is called "sugar grass" in parts of Australia, and cattle are very fond of it.

For previous introduction see No. 41754.

78474 and 78748. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Bangkok, Siam. Seeds presented by Dr. A. Kerr, director of the botanical section of the Ministry of Commerce and Communications. Received January 30, 1929.

78747. GOSSYPIUM sp.

A perennial cotton cultivated about Bangkok. It is not grown as a regular crop, and the floss is used only for making string.

78748. GOSSYPIUM sp.

A perennial cotton grown from seeds collected on Kaw Samui, one of the islands in the Gulf of Siam.

78749 to 78816.

From Tiflis, Caucasus, Russia. Seeds presented by the director, Botanic Garden. Received February 4, 1929.

78749 to 78752. AEGILOPS spp. Poaceae. **Grass.**

78749. AEGILOPS CYLINDRICA Host.

78750. AEGILOPS CYLINDRICA Host.

78751. AEGILOPS TAUSCHII Coss.

78752. AEGILOPS TRIUNCIALIS L.

A thickly branched annual grass with ascending stems and flat rough leaves. It is native to dry places in the Mediterranean region.

78753 to 78755. AGROPYRON spp. Poaceae. **Grass.**

78753. AGROPYRON DAGNAE Hort.

No place of publication for this name has been found.

The seeds closely resemble those of *Agropyron cristatum*.

78754. AGROPYRON ORIENTALE (L.) Roem. and Schult.

An annual, much-branched grass, prostrate-ascending in habit, native to sandy places in Asia Minor and Turkestan.

For previous introduction see No. 64091.

78755. AGROPYRON REPENS GLAUCESCENS Peterm.

Said to be a glaucescent form of the well-known quack grass. The seeds are more like those of *Agropyron cristatum*.

78756. AMYGDALUS GEORGICA Desf. (*Prunus nana georgica* DC.). Amygdalaceae.

78749 to 78816—Continued.

A hardy bush, native to southern Russia, which closely resembles *Amygdalus nana*, differing in its darker-colored flowers and smaller leaves.

For previous introduction see No. 67905.

78757. AMYGDALUS FENZLIANA × COMMUNIS. Amygdalaceae.

A cross between the almond (*Amygdalus communis*) and a closely related species from the Caucasus. The latter is a low, sometimes spiny tree, with narrow, grayish green leaves, small whitish flowers, and fruits with scarcely any flesh.

78758. ANDROPOGON INTERMEDIUS CAUCASICUS (Trin.) Hack. Poaceae. **Grass.**

78759. ANDROPOGON ISCHAEMUM L. Poaceae. **Grass.**

78760. ARTHRAXON HISPIDUS CRYPTATHERUS (Hack.) Honda. Poaceae. **Grass.**

78761 to 78770. ASTRAGALUS spp. Fabaceae.

78761. ASTRAGALUS AMMOPHILUS Kar. and Kir.

A leguminous annual with branched prostrate stems, small pinnate leaves, and minute flowers in small heads. It is native to the mountains of Persia and Turkestan.

78762. ASTRAGALUS BRACHYCARPUS Bieb.

A leguminous perennial, a foot or more high, with purple flowers, nearly an inch long, in lax ovoid racemes. It is native to the Caucasus Mountains.

78763. ASTRAGALUS FALCATUS Lam.

An upright perennial, nearly 2 feet high, with yellowish flowers in an elongated cluster. It is native to southern Russia and Asia Minor.

For previous introduction see No. 66517.

78764. ASTRAGALUS GLYCYPHYLLOS L.

A prostrate, spreading herbaceous perennial, native to Asia Minor.

78765. ASTRAGALUS HAMOSUS L.

An annual gray-green hairy plant, with prostrate or ascending stems 8 inches to a foot long. It is native to sunny places in the Mediterranean countries.

For previous introduction see No. 66540.

78766. ASTRAGALUS KADSHORENSIS Bunge.

A leguminous perennial, native to the Caucasus, with short ascending stems 2 to 3 inches high, pinnate leaves, and rather large light bluish-violet flowers.

78767. ASTRAGALUS MOLLIS Bieb.

A nearly stemless perennial with hairy pinnate leaves and yellow flowers in cylindrical racemes. It is native to the arid deserts of Armenia and Caucasus.

78749 to 78816—Continued.

78768. ASTRAGALUS MONSPESSULANUS L.

A leguminous perennial with a woody rootstock, a very short stem, and a rosette composed of bright-green compound leaves intermingled with the remains of the previous year's leaves. The small flowers are purplish violet. Native to southern Europe.

78769. ASTRAGALUS PSEUDONOBRYCHIS Hort.

A legume of possible value as a green manure.

78770. ASTRAGALUS SANGUINOLENTUS Bieb.

A perennial leguminous plant with small pinnate leaves and small white flowers, with red keels, in headlike racemes. It is native to the Caucasus Mountains.

78771. BRACHYPODIUM SYLVATICUM (Huds.) Beauv. Poaceae. **Grass.**

A grass native to the woods and thickets throughout Europe and eastward through northern Asia to the Provinces of Sinkiang and Hupeh, China.

For previous introduction see No. 53134.

78772. BROMUS ALBIDUS Bieb. Poaceae. **Grass.**

78773. BROMUS RUBENS L. Poaceae. **Grass.**

78774 to 78776. CORONILLA spp. Fabaceae.

78774. CORONILLA CAPPADOCICA Willd.

A yellow-flowered leguminous perennial with ascending stems and pinnate leaves. Native to rocky places in Asia Minor.

78775. CORONILLA SCORPIOIDES (L.) Koch.

An erect yellow-flowered herbaceous perennial, about 8 inches high, native to the Mediterranean countries.

For previous introduction see No. 69850.

78776. CORONILLA VARIA L. **Crownvetch.**

A prostrate or ascending leguminous perennial, about 4 feet high, with a thick rootstock, compound leaves, and pinkish flowers in dense umbels. It is native to central Europe.

For previous introduction see No. 53607.

78777. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

78778. ECHINARIA CAPITATA (L.) Desf. Poaceae. **Grass.**

78779. ERIANTHUS RAVENNAE (L.) Beauv. Poaceae. **Grass.**

78780. FESTUCA OVINA SULCATA Hack. Poaceae. **Grass.**

78781 to 78786. HORDEUM spp. Poaceae.

78781. HORDEUM BULBOSUM L. **Grass.**

78782. HORDEUM DISTICHON PALMELLA Harlan. **Two-rowed barley.**

78783. HORDEUM MURINUM L. (*H. leporinum* Link). **Grass.**

78749 to 78816—Continued.

78784. HORDEUM MURINUM L. (*H. leporinum* Link). **Grass.**

Forma *nigracans*.

78785. HORDEUM VULGARE NIGRUM (Willd.) Beaven. **Six-rowed barley.**

78786. HORDEUM VULGARE PALLIDUM Seringe. **Six-rowed barley.**

78787. KOELERIA GRACILIS Pers. Poaceae. **Grass.**

78788. TULIPA SCHMIDTII Fomin. Liliaceae. **Tulip.**

A wild tulip, native to the Caucasus, with a bulb about 2 inches in diameter, oblong-lanceolate obtuse leaves, and red flowers 3 inches long.

78789. LATHYRUS ROSEUS Stev. Fabaceae.

An erect much-branched perennial, 2 or 3 feet high, with ovate leaflets and rose-colored flowers. Native to Asia Minor.

78790. MEDICAGO SATIVA GLUTINOSA (Bieb.) Urban. Fabaceae.

78791. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

78792. MELICA MICRANTHA Boiss. and Hohen. Poaceae. **Grass.**

78793. MELICA PICTA Koch. Poaceae. **Grass.**

78794 to 78796. MELILOTUS spp. Fabaceae.

78794. MELILOTUS ALBA Desr. **White sweetclover.**

78795. MELILOTUS NEAPOLITANA Ten. **Sweetclover.**

An annual, mostly upright plant, up to 15 inches high, branched from the base, with obovate to roundish hairy leaflets and small bright-yellow flowers. It is native to the Mediterranean countries.

For previous introduction see No. 43595.

78796. MELILOTUS OFFICINALIS (L.) Lam. **Sweetclover.**

78797. ORYZOPSIS HOLCIFORMIS (Bieb.) Hack. Poaceae. **Grass.**

A perennial grass with a thick, short rhizome and stems 3 feet or more high. The panicles are a foot or more long. It is native to southern and southeastern Europe.

For previous introduction see No. 64095.

78798. ORYZOPSIS PARADOXA VIRESCENS (Trin.) Richter. Poaceae. **Grass.**

A perennial, densely cespitose grass with rough stems up to 4 feet high and spreading panicles about 8 inches high. It is native to southern Europe and Asia Minor.

For previous introduction see No. 64096.

78799. PHLEUM PHLEOIDES (L.) Karst. (*P. boehmeri* Wibel). Poaceae. **Timothy.**

A perennial, gray-green, loosely cespitose grass with short, creeping rhizomes

78749 to 78816—Continued.

and stems 1 to 2 feet high. It is native to dry stony places throughout central Europe.

For previous introduction see No. 63992.

78800. PHLEUM PANICULATUM Huds. Poaceae. **Grass.**

An erect or ascending annual grass, 4 to 16 inches high, native to the Mediterranean countries.

For previous introduction see No. 74171.

78801. PISUM ELATIUS Bieb. Fabaceae. **Pea.**

A hardy annual, about 5 feet high, with leaves composed of one to three pairs of narrow leaflets and with purple flowers. It is native to the woods and thickets in the alpine regions of Europe.

For previous introduction see No. 67925.

78802 to 78805. POA spp. Poaceae. **Grass.**

78802. POA ANNUA L.

78803. POA BULBOSA VIVIPARA Koel.

78804. POA LONGIFOLIA PLANIFOLIA Somm. and Lev.

78805. POA NEMORALIS L.

Variety *latifolia*.

78806. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. Amygdalaceae.

The wild form of the myrobalan plum. It is a small spreading tree with more slender branches than the type, smaller flowers, and yellowish fruits about an inch long. Native to Asia Minor.

For previous introduction see No. 43865.

78807. PTEROCARYA FRAXINIFOLIA (Lam.) Spach (*P. caucasica* Meyer). Juglandaceae.

A handsome spreading tree, 60 feet or less high, with attractive dark-green pinnate leaves about a foot long. It is native to the Caucasus and will probably not be hardy north of Massachusetts.

For previous introduction see No. 74596.

78808. TRIFOLIUM CAMPESTRE Schreb. Fabaceae. **Clover.**

A biennial or annual clover up to 20 inches high, prostrate or ascending, with bright-yellow flowers. It is native to central Europe.

78809 to 78814. TRITICUM spp. Poaceae.

78809. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

78810 and 78811. TRITICUM DURUM Desf. **Durum wheat.**

78810. Variety *apulicum*.

78811. Variety *hordeiforme*.

78812 and 78813. TRITICUM PERSICUM Aitch. and Hemsl. **Persian wheat.**

78812. Variety *fuliginosum*.

78813. Variety *rubiginosum*.

78814. TRITICUM TURGIDUM L. **Poulard wheat.**

78815 and 78816. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

78815. Variety *cinereum*.

78816. Variety *erythrospermum*.

78817. VITIS DAVIDII (Carr.) Foex. Vitaceae. **Brier grape.**

From Yokohama, Japan. Cuttings purchased from the Yokohama Nursery Co. Received February 13, 1929.

Koshiu. A variety growing in Koshiu, Yamanashi Ken, a region which is very hilly and surrounded by high mountains. The highest temperature in the summer is about 90° F. This is a very late grape and is said to be the best in Japan in both flavor and appearance. The bunches weigh up to 2¼ pounds.

For previous introduction see No. 55098.

78818. CAVANILLESIA PLATANIFOLIA H. B. K. Bombacaceae.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received May 7, 1928. Numbered in March, 1929.

A Colombian tree up to 100 feet high, with a large thick trunk, smooth pale bark, large shallowly 5-lobed to 7-lobed leaves, and red flowers an inch long. The coarse soft pithlike wood is white or yellowish and is used for making canoes and rafts.

78819 to 78826. AVENA spp. Poaceae. **Oats.**

From Sydney, New South Wales, Australia. Seeds presented by W. Wenholz, director of plant breeding, Department of Agriculture, Sydney. Received February 12, 1929.

Varieties of oats which have shown resistance to crown rust under field conditions in New South Wales.

78819 and **78820.** AVENA BYZANTINA Koch.

78819. *Algerian* (G'28 A–18).

78820. *Algerian* (G'28 8a18).

78821. AVENA STRIGOSA Schreb.

Variety *glabrescens*. (G'28 $29a_6$ [I.28/7639].)

78822. AVENA sp.

Buddah (G'28 $17a_{17}$).

78823. AVENA sp.

Buddah (single plant No. 991).

78824. AVENA sp.

Mulga (selection 4107 [G'28 $21a_{10}$]).

78825. AVENA sp.

(*Sunrise* × *Victory*) 9 G'28.

78826. AVENA SATIVA L.

From Ruakura (G'28 $15a_{17}$).

78827. PHASEOLUS LUNATUS L. Fabaceae. **Lima bean.**

From China. Seeds presented by Dr. W. H. Dobson, Forman Memorial Hospital, Yeoungkong, Kwangtung, China. Received February 12, 1929.

A variety grown locally.

78828 and 78829. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Baghdad, Irak. Seeds presented by J. F. Webster, Inspector General of Agriculture. Received February 13, 1929.

78828. *Punjab B 8*.

78829. *Nyngan 3*.

78830. GOSSYPIUM sp. Malvaceae. **Cotton.**

From the Dominican Republic. Seeds presented by Dr. R. Ciferri, Director de la Estación Nacional Agronómica y Colegio de Agricultura. Received February 13, 1929.

Granbolla or *granbola* cotton labeled: "Dominican cotton collection No. 1." This was grown in the dry zone of Monte Cristi, and appraised there as a good indigenous variety. The chief characteristics are a very early maturity of the boll and the small size of the plants.

78831. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Keijo, Chosen. Plants grown from seeds presented by the Director of the Forestry Experiment Station, March 9, 1926. Numbered in January, 1929.

In the endeavor to relieve the situation caused by the rapid disappearance of our native chestnut, due to the ravages of the blight fungus, the Chinese hairy chestnut is being introduced into this country in considerable quantity. The size and quality of the nuts compare rather favorably with our native chestnut, although neither the size of the tree nor the tannin content measure up to those of our native species.

For previous introduction see No. 75754.

78832. ARRACACIA XANTHORRHIZA Bancroft (*Arracacha esculenta* DC.). Apiaceae. **Arracacha.**

From Kingston, Jamaica. Tubers presented by M. S. Goodman, superintendent of the Hope gardens of the Department of Science and Agriculture. Received February 21, 1929.

The arracacha is an herbaceous perennial about 3 feet high, with carrotlike foliage and small umbels of purple flowers. It is native to northern South America. The large fleshy roots are used as food in South America and Central America, being boiled like parsnips or sliced and fried.

For previous introduction see No. 78262.

78833 to 78851. VITIS VINIFERA L. Vitaceae. **European grape.**

From Sawbridgeworth, Herts, England. Cuttings purchased from Thomas Rivers & Son. Received February 28, 1929.

78833. *Alnwick seedling.*

78834. *Appley Towers.* A late black variety of good flavor and keeping qualities.

78835. *Diamond Jubilee.*

78836. *Directeur Tisserand.*

78837. *Dr. Hogg.*

78838. *Duke of Buccleuch.*

78839. *Early Auvergne Frontignan.*

78840. *Lady Downe's seedling.* A large, oval, black variety with sweet, firm flesh richly flavored with a fine aroma. It is said to be one of the best late grapes.

78841. *Lady Hastings.*

78842. *Lady Hutt.* A late, round white variety of excellent quality.

78833 to 78851—Continued.

78843. *Madresfield Court.* A very large black variety with a muscat flavor when quite ripe.

78844. *Melton Constable.*

78845. *Mill Hill Hamburgh.*

78846. *Mrs. Pearson.*

78847. *Muscat Champion.*

78848. *Muscat Hamburg.*

78849. *Prince of Wales.*

78850. *Reine Olga.* A round, reddish variety.

78851. *White Frontignan.* A medium-sized, round variety with a high muscat flavor. It is said to be a most abundant bearer.

78852. CANNA EDULIS Ker. Cannaceae. **Edible canna.**

From Honolulu, Hawaii. Rootstocks presented by J. M. Westgate, Director, Hawaii Agricultural Experiment Station. Received February 26, 1929.

A close relative of the ornamental cannas, cultivated for its edible tubers.

For previous introduction see No. 75858.

78853 and 78854. LILIUM spp. Liliaceae.

From Bengal, India. Seeds purchased from R. B. & D. S. Pradhan, the Chandra Nursery. Received March 2, 1929.

78853. LILIUM GIGANTEUM Wall. **Giant lily.**

A lily, native to the Himalayas, with bulbs which grow close to the surface in rich black mold, at altitudes between 7,500 and 9,000 feet, where it is covered with snow from November to April. The smooth hollow stems, 6 to 9 feet high, are sometimes used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large white fragrant flowers, often 12 to a raceme, the perianth tube is slightly greenish, and the inner surfaces of the segments are tinged with deep purple.

For previous introduction see No. 77585.

78854. LILIUM WALLICHIANUM Schult. f. **Lily.**

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long, and usually solitary creamy waxy white fragrant flowers, 9 inches long, which are golden yellow at the base inside and green outside.

78855. LEYCESTERIA FORMOSA Wall. Caprifoliaceae.

From Gresham, Oreg. Plants presented by the W. L. Crissey Alpine Gardens. Received March 5, 1929.

A handsome ornamental bush, closely allied to the honeysuckles, which is native to the cooler sections of the Himalayas. It is from 6 to 8 feet high, with broadly cordate leaves 5 to 7 inches long, terminal spikes of purplish flowers in the axils of the purplish bracts, and subglobose red-purple berries.

For previous introduction see No. 65261.

78856 to 78870.

From Stevenage, Herts, England. Seeds purchased from Clarence Elliott (Ltd.), Six Hills Nursery. Received February 25, 1929.

78856. AGAPANTHUS AFRICANUS (L.) Hoffmannsegg (*Abumon africanum* Britton). Liliaceae. **African lily.**

Variety *Mooreanus*. A robust tuberous-rooted plant reputed to be winter-hardy, 1½ feet high, with short straplike leaves and dark-blue flowers in fair-sized umbels.

78857 to 78862. GENTIANA spp. Gentianaceae. **Gentian.**

78857. GENTIANA GENTIANELLA A. T. Johnson. **Stemless gentian.**

A stemless European alpine plant which forms a dense carpet of compact tufts of glossy green leaves from which rise large tubular flowers of an amazingly deep blue.

78858. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

A comparatively robust subalpine species forming clumps of vigorous stems up to 3 feet high with opposite ovate leaves. In late summer it produces from the uper axils almost sessile trumpet-shaped flowers of sapphire blue which weigh down the arching stalks. There is some variation in color from seed, which germinates freely and produces flowering plants in about three years. The plant is said to be indifferent as to whether the soil is alkaline or not.

78859. GENTIANA BAVARICA L.

A difficult species requiring conditions similar to those of moist alpine meadows for success. It forms compact tufts of stout stems about 3 inches high with yellow-green boxlike leaves and flowers somewhat like those of *Gentiana verna*, with five large lobes, but of a velvety dark-blue color and produced much later in the summer. It is said to be indifferent to limestone or granite soils provided it has the proper moist turfy soil.

78860. GENTIANA LAGODECHIANA Hort.

A dwarf form of *Gentiana septemfida*, with deeper blue flowers and prostrate habit.

78861. GENTIANA SEPTEMFIDA Pall.

An Asiatic gentian which somewhat resembles *Gentiana asclepiadea*, requiring similar conditions. It makes spreading clumps up to 12 inches high with opposite ovate leaves and heads of wide-mouthed trumpet-shaped blue flowers in late summer. It varies considerably in habit and flower color, but all forms do well in peaty loam with ample but not stagnant water supply.

78862. GENTIANA VERNA L.

This is the gentian of the Alps, difficult in cultivation unless provided with peaty soil filled with sharp sand, a liberal supply of coarse broken stone, perfect underdrainage, and a constant supply of moisture in summer. It is a social plant and should be grown with other plants to simulate an alpine turf, where it will produce vigorous clumps of low shoots, gray-green foliage, and, in early summer, myriads of starry flowers of indescribable blue.

78856 to 78870—Continued.

78863. IRIS SINTENISII Janka. Iridaceae.

A beardless iris of the same general type as *Iris graminea* with tufted evergreen leaves about 12 inches high and flower stalks little higher than the leaves. Flowers blue purple as in *I. graminea* with red purple on the style branches and hafts. Native to southeastern Europe and Asia Minor.

78864. LILIUM RUBELLUM Baker. Liliaceae. **Rubellum lily.**

A miniature trumpet lily from Japan with slender green stems spotted with purple, rarely exceeding 2 feet in height, narrow leaves, and one to eight smallish trumpets of rosy white, flushed darker without. It is more delicate than Kramer's lily (*Lilium japonicum*), and, like it, should be grown in a low shrubby undergrowth, where its head can rise to full sun.

78865 to 78868. PRIMULA spp. Primulaceae. **Primrose.**

78865. PRIMULA sp.

Primrose blue. A blue-flowered horticultural strain of the common garden primrose.

78866. PRIMULA HELODOXA Balf.

A large Chinese primrose, with flower stalks like those of *Primula japonica*, about 3 feet high, with seven or eight tiers of soft-yellow flowers resembling in color and size those of *Jasminum primulinum*. It requires a moist but well-drained site.

78867. PRIMULA POLYANTHA Mill. **Polyanthus primrose.**

A European primrose, about a foot high, with more or less upright yellow flowers in erect umbels which stand above the long leaves.

78868. PRIMULA SIKKIMENSIS Hook.

This primrose, with flower stalks 1 or 2 feet high and with the habit of *Primula secundiflora*, grows in moist meadows and along stream beds in the Himalayas at an altitude of 13,000 feet. The lanceolate drooping leaves are dull green on both sides, and the rich-yellow flowers, which appear in June, are large and bell-shaped. It should be treated as a short-lived perennial.

78869. SISYRINCHIUM BOREALE (Bickn.) J. K. Henry. Iridaceae.

A semiaquatic plant up to a foot in height, with narrow leaves and yellow flowers on erect pedicels. Native to southwestern Canada and northwestern United States.

78870. SISYRINCHIUM FILIFOLIUM Gaud. Iridaceae.

A herbaceous perennial, 6 inches to a foot in height, native to the Falkland Islands. In cool peaty soil, with good drainage, it spreads into grassy tufts of narrow rushlike leaves, and produces from six to nine stalks with white bell-shaped flowers of exquisite delicacy.

78871 to 78914.

From Newry, Ireland. Seeds purchased from T. Smith, Daisy Hill Nursery. Received February 23, 1929.

78871 to 78874. ALSTROEMERIA spp. Amaryllidaceae.

78871 to 78914—Continued.

78871. ALSTROEMERIA AURANTIACA D. Don. **Yellow alstroemeria.**

A Chilean plant 2 to 4 feet high, with about 50 thin leaves 3 to 4 inches long and bright-yellow flowers, spotted brown within, in a compound umbel.

78872. ALSTROEMERIA CHILENSIS Lem. **Chilean alstroemeria.**

A stout tuberous-rooted plant 2 to 4 feet high, with scattered obovate or spatulate leaves and large rosy red or whitish flowers in pairs. Native to Chile.

78873 and 78874. ALSTROEMERIA AURANTIACA D. Don. **Yellow alstroemeria.**

For previous introduction and description see No. 78871.

78873. Variety *flava*.

78874. Variety *major*.

78875. RHODODENDRON LUTEUM Sweet (*Azalea pontica* L.). Ericaceae. **Pontic azalea.**

A deciduous shrub 8 to 12 feet high, native to the Caucasus region, with hairy oblong leaves and a profusion of funnelform fragrant yellow flowers 2 inches across.

78876. BERBERIS BUXIFOLIA Lam. Berberidaceae. **Magellan barberry.**

An erect bushy, partially evergreen barberry, 6 to 8 feet high, with hard leathery oblong-obovate leaves up to an inch long, small solitary amber-yellow flowers, and globular dark-purple fruits. Native to southern Chile.

For previous introduction see No. 58099.

78877. BERBERIS EMPETRIFOLIA Pers. Berberidaceae. **Crow barberry.**

A low densely branched barberry, 1 or 2 feet high, with linear, bright-green leaves, and bluish-black fruits. Native to southern South America.

For previous introduction see No. 73532.

78878. BRUCKENTHALIA SPICULIFOLIA Reichenb. Ericaceae. **Spikeheath.**

A low evergreen shrub which forms large tufts of slender shoots with small needle-shaped leaves and short terminal racemes of nodding rosy pink flowers. Requires gritty acid soil. Native to southeastern Europe and Asia Minor.

78879. BULBINELLA HOOKERI (Colenso) Cheeseman (*Chrysobactron hookeri* Colenso). Liliaceae.

A New Zealand herbaceous perennial related to the asphodels, varying in size from 2 to 4 inches up to 3 feet. The numerous glaucous-green leaves are linear, and the loose racemes of bright-yellow flowers are on slender scapes up to 10 inches high.

For previous introduction see No. 77547.

78880. CYANANTHUS LOBATUS Wall. Campanulaceae.

A herbaceous perennial with more or less prostrate shoots up to 2 feet high with ovate-oblong lobed leaves an inch long and single blue flowers somewhat like a periwinkle, sometimes an inch across, appearing in late summer. Native to the Himalayas.

For previous introduction see No. 41615.

78881 to 78892. CYTISUS SCOPARIUS ANDREANUS Dipp. Fabaceae. **Paradise broom.**

The paradise brooms are upright shrubs with slender green branches, small obovate leaflets, and flowers an inch across, of various shades of yellow and red.

78881. *Dragon fly.* Flowers crimson and old gold.

78882. *Fairy.* Flowers cream and pink.

78883. *Firefly.* Flowers scarlet and yellow.

78884. *Fulgens.* Flowers very dark crimson.

78885. A late flowering form.

78886. *Mayfly.* Flowers copper and yellow.

78887. *Moonlight.* Flowers pale cream colored.

78888. *Newry gold.*

78889. *Newry Seedling.* Flowers cream and rose colored.

78890. *Red Admiral.*

78891. *Rosy Moonlight.* Flowers cream colored, tinged with rose.

78892. *Praecox.* Flowers cream colored, appearing early.

78893 to 78899. ERICA spp. Ericaceae.

78893. ERICA ARBOREA L. **Tree heath.**

A bushy shrub or small tree, at times 20 feet high, with linear, whorled leaves and very fragrant whitish flowers borne in great profusion in early spring. Native to the Mediterranean countries.

78894. ERICA CILIARIS L. **Fringed heath.**

A straggling shrub, up to a foot high, with long prostrate stems from which the flowering branches spring erect in dense masses. The oval whorled leaves are green above and whitish beneath. The rosy flowers are in whorls of three on erect terminal racemes 2 to 5 inches long appearing in late summer. Native to southwestern Europe.

78895 to 78897. ERICA CINEREA L. **Twisted heath.**

For previous introduction and description see No. 78680.

78895. *Rose Queen.* A variety with 6-inch sprays of clear rose-colored flowers.

78896. Variety *purpurea.* A variety with purple flowers.

78897. Variety *rosea.* A variety with rose-colored flowers.

78898. ERICA STRICTA Donn. **Corsican heath.**

A woody perennial about 2 feet high, with rigid branches, whorled leaves, and rosy purple flowers. Native to Corsica.

78871 to 78914—Continued.

78899. ERICA VAGANS L.
Cornish heath.

A low European shrub a foot or more high, with its leaves in whorls of four or five, and pale purplish red flowers.

78900 and 78901. CALLUNA VULGARIS (L.) Salisb. **Heather.**

78900. A low evergreen European shrub 1 to 2 feet high, with small ovate leaves and dense racemes 6 to 10 inches long of rosy pink flowers.

78901. Variety *alba*. A white-flowered form.

78902. GENISTA MONOSPERMA (L.) Lam. Fabaceae. **Bridal-veil broom.**

An ornamental leguminous shrub, native to Spain, about 10 feet high with slender grayish branches and small, very narrow leaves. The fragrant white flowers are in short lateral racemes.

78903 to 78906. GERANIUM spp. Geraniaceae. **Cranesbill.**

78903. GERANIUM ANDRESSI J. Gay.

A European perennial 1½ feet high which has a brown hairy stem, opposite palmate leaves, and light-rose flowers with the petals fringed at the base.

78904. GERANIUM LOWII Hort.

A plant 2 feet high. The bright rose flowers have violet centers.

78905. GERANIUM SANGUINEUM L.

Variety *album*. A white-flowered form.

78906. GERANIUM SESSILIFLORUM Cav.

A low herbaceous perennial which forms compact tufts of dark-green leaves, among which nestle scores of grayish white flowers. Native to Australia and Chile.

78907 to 78909. MENZIESIA POLIFOLIA Juss. Ericaceae.

A low evergreen shrub about 2 feet high, with shining dark-green elliptic leaves half an inch long and flowers in racemes. Native to western Europe.

78907. A purple-flowered variety.

78908. Variety *alba*. A white-flowered variety.

78909. Variety *atropurpurea*. A variety with deep-purple flowers.

78910 and 78911. MORINA LONGIFOLIA Wall. Dipsacaceae.

78910. A hairy thistlelike perennial 3 to 4 feet high, with narrow leaves 6 inches long and showy crimson flowers crowded in dense whorls near the top of the stem. Native to the Himalayas at altitudes of 9,000 to 14,000 feet.

78911. Variety *gigantea*. A variety with bright-red stems 5 feet high.

78912. PRIMULA CAPITATA Hook. Primulaceae. **Primrose.**

Variety *mooreanus*. A form of the species with fine round heads of deep-violet flowers, calyxes and stems dusted with white farina, and rosettes of spreading green leaves.

78913. PRIMULA CHIONANTHA Balf. and Forr. **Primrose.**

78871 to 78914—Continued.

A stout herbaceous plant 1 to 2 feet high, with blunt narrowly oval leaves, sulphur-mealy beneath, and clusters of white flowers borne in a many-flowered umbel at the apex of a stout scape. It appears to thrive best in rich moist soil.

78914. ROSCOEA PURPUREA J. E. Smith. Zingiberaceae.

A thick-rooted perennial gingerlike Himalayan plant about a foot high with sessile lanceolate leaves and purple, rarely pale lilac or white flowers in a sessile spike.

78915 to 78974.

From Edinburgh, Scotland. Seeds presented by William Wright Smith, Regius Keeper, Royal Botanic Garden. Received February 27, 1929.

78915 to 78919. BERBERIS spp. Berberidaceae. **Barberry.**

78915. BERBERIS ANGULOSA Wall.

An ornamental shrub from the mountainous sections of northern India, which becomes about 4 feet high, with dark glossy green leaves, large solitary globose orange-yellow flowers half an inch wide, and elliptical, scarlet berries nearly an inch long. The autumnal coloring of the foliage is said to be very striking, and the fruits, less acid than most barberries, are edible.

For previous introduction see No. 65223.

78916. BERBERIS BREVIPANICULATA C. Schneid. **Shortcluster barberry.**

A shrub from western China with tawny glabrous young branches later becoming furrowed and ash-colored, and graceful golden spines. The oblong entire clustered leaves are one-third of an inch long, shining above, distinctly glaucous, and with a bloom. The small graceful flowers are in panicles which are sometimes an inch long.

For previous introduction see No. 52336.

78917. BERBERIS BUXIFOLIA Lam.
Magellan barberry.

For previous introduction and description see No. 78876.

78918. BERBERIS UMBELLATA Wall.
Barberry.

A hardy subevergreen Himalayan shrub about 3 feet high, with narrow leaves slightly glaucous beneath, and umbellate racemes of yellow flowers.

For previous introduction see No. 65755.

78919. BERBERIS WALLICHIANA DC.

Variety *compacta*. An evergreen shrubby barberry from the Himalayas. It is probably too tender for the North.

78920. CARMICHAELIA FLAGELLIFORMIS Colenso. Fabaceae.

A new Zealand shrub about 4 feet high, with stiff slender flat green branches which take the place of leaves and short dense axillary fascicles of purplish flowers borne in great profusion.

For previous introduction see No. 76562.

78915 to 78974—Continued.

78921 to 78925. ENKIANTHUS spp. Ericaceae.

78921 to 78923. ENKIANTHUS CAMPANULATUS (Miquel) Nicholson. **Redvein enkianthus.**

78921. Variety *palibinii*. A Japanese shrub with the branches often verticillate, oblanceolate green leaves, paler beneath, and bell-shaped drooping red flowers in short terminal racemes.

78922. Variety *pallidiflorus*. A shrub with its branches usually verticillate, narrow green leaves, paler beneath, up to 1½ inches long, and sessile terminal racemes of nearly white flowers. Native to Japan.

78923. Variety *recurvus*. A Japanese shrub with the branches usually verticillate, lanceolate papery leaves up to 2 inches long, and pink flowers nearly half an inch across, in terminal clusters.

78924. ENKIANTHUS CHINENSIS Franch. (*E. sinohimalaicus* Craib).

A Chinese shrub with elongated branches, lanceolate leaves up to 2 inches long, and salmon-red flowers in shortened racemes.

78925. ENKIANTHUS CAMPANULATUS (Miquel) Nicholson. **Redvein enkianthus.**

Variety *tectus*. A shrub native to Japan, with usually whorled branches, leaves of variable shape up to an inch long, and sessile racemes of pink flowers.

78926. FUCHSIA CORYMBIFLORA Ruiz and Pav. Onagraceae.

A handsome Peruvian fuchsia with large serrate, taper-pointed leaves and deep-red flowers. The plant becomes tall, but requires support in order to attain full height. It is adapted for training on pillars or pergolas in the warmest parts of the United States.

For previous introduction see No. 65174.

78927. FUCHSIA CORYMBIFLORA Ruiz and Pav. Onagraceae.

Variety *alba*. A white-flowered form from Peru.

78928 to 78940. GENTIANA spp. Gentianaceae. **Gentian.**

78928. GENTIANA ASCLEPIADEA L. **Milkweed gentian**

For previous introduction and description see No. 78858.

78929. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

Variety *alba*. A white-flowered form.

78930. GENTIANA CRASSICAULIS Duthie.

A glabrous perennial a foot or more high, native to western China, with elliptic leaves and greenish-white flowers, 20 to 30 in a head.

78931. GENTIANA CRUCIATA L. **Cross gentian.**

One of the less difficult alpine species, making foot-high clumps with handsome dark-green foliage and producing crowded heads of small, 4-lobed blue flowers in late summer and early autumn. Native to Europe and northern Asia.

78932. GENTIANA LUTEA L.

A coarse perennial species too large for the rock garden with 3 to 4 foot stems bearing handsome rugose foliage, crowned in late summer in the upper whorls of leaves with crowded clusters of slender-lobed golden-yellow flowers.

78933. GENTIANA PHLOGIFOLIA Schott and Kotschy.

A rather easy creeping alpine species, native to central Europe, about 10 inches high, with clustered dark-blue flowers, produced in early summer.

78934. GENTIANA PURPUREA L.

A European alpine, with somewhat lax stems up to 3 feet high, narrow leaves, and dull purplish-blue flowers, flushed and spotted yellowish brown within, appearing in late summer.

78935. GENTIANA SAPONARIA L.

A hardy herbaceous perennial not exceeding 2 feet in height, with an ascending stem, narrow-pointed opposite leaves and light-blue flowers. Native to eastern North America.

78936 to 78938. GENTIANA SEPTEMFIDA Pall.

78936. For previous introduction and description see No. 78861.

78937. Variety *cordifolia*. A variety with heart-shaped leaves. From Turkish Armenia.

78938. Variety *procumbens*. A variety with stems which tend to lie flat on the ground. It is smaller, more delicate than the type and has a tendency to give fewer, usually solitary flowers.

78939. GENTIANA TIBETICA King. **Himalayan gentian.**

An erect plant 1½ feet high, with oblong-ovate leaves 5 to 7 inches long and small dull yellowish-white axillary flowers an inch long. Native to Tibet; introduced only for comparative study.

78940. GENTIANA TUBULOSA Gilg.

An annual gentian from Argentina, with upright stems 6 inches high, narrowly oblong membranous leaves half an inch long, and lilac-blue flowers, usually solitary, about an inch long.

78941. HEMEROCALLIS PLICATA Hort. Liliaceae. **Daylily.**

78942. PHILADELPHUS INCANUS SARGENTIANUS Koehne. Hydrangeaceae. **Gray mockorange.**

A variety which has yellowish or brownish branches and leaves with the lower surfaces pilose.

78943. PHILADELPHUS SERICANTHUS REHDERIANUS Koehne. Hydrangeaceae. **Silk mockorange.**

A variety with broadly ovate leaves up to 4½ inches long and 2 inches wide.

78944. ROSA FOETIDA Herrmann (*R. lutea* Mill.). Rosaceae. **Austrian brier rose.**

78915 to 78974—Continued.

A hardy shrub, up to 10 feet high, with slender stems and bright yellow flowers. Native to western Asia.

For previous introduction see No. 72879.

78945. ROSA FOETIDA BICOLOR (Jacq.) Willm. Rosaceae.
Austrian copper brier rose.

Differs from the type in having coppery red flowers.

78946 to 78964. SEDUM spp. Crassulaceae. **Stonecrop.**

78946. SEDUM AIZOON L.
Aizoon stonecrop.

A glabrous fleshy perennial, native to Siberia, with several simple stems 1 to 2 feet high, alternate oblong-lanceolate distant leaves, and numerous yellow flowers in loose cymes.

78947. SEDUM ALBUM L.
White stonecrop.

A succulent perennial cespitose alpine, 4 to 6 inches high, native to the Mediterranean countries. The white flowers are in much-branched corymbose cymes.

78948. SEDUM ALBUM L.
White stonecrop.

Variety *brevifolium*. A form with shorter leaves.

78949. SEDUM ALTISSIMUM Poir.

A hardy common species from the Mediterranean region. The plants vary in height from 6 inches to 2 feet, but all forms are characterized by their decumbent stems, ascending branches crowded with sharply tipped more or less glaucous leaves, and very tall flowering branches which bear smaller leaves and dense terminal umbellate cymes of greenish-white flowers.

78950. SEDUM ANOPETALUM DC.

A hardy species native from central and southern Europe eastward, which, like the preceding, varies greatly and occurs under many names. It is related to *S. reflexum*, but seems to differ most in the more slender terete leaves and the erect carriage of the developing inflorescence. The flowers are usually greenish white, more rarely yellow.

78951. SEDUM ASIATICUM (Don) Spreng.

A Himalayan succulent up to a foot high, with opposite linear, irregularly toothed leaves and yellow flowers in compact globose cymes.

For previous introduction see No. 39075.

78952. SEDUM CRASSIPES Wall.

A low succulent Himalayan alpine with slender stems 2 to 6 inches high, linear somewhat dentate leaves one-half inch long, and straw-colored flowers in a dense cyme.

78953. SEDUM DASYPHYLLUM L.
Leafy stonecrop.

A low hardy tufted perennial, native to the Mediterranean countries, with slender stems, and crowded glaucous

78915 to 78974—Continued.

beadlike leaves which are easily broken from the stem. The flowers are white tinted pink, but are not so showy as the leaves. The plant is said to prefer a dry site.

78954. SEDUM ELLACOMBIANUM Praeger.

A Japanese succulent perennial of cespitose habit, with annual stems up to 6 inches high, obovate or spathulate leaves, and yellow flowers in a compact cymose inflorescence.

78955. SEDUM EWERSII Ledeb.
Ewers stonecrop.

A hardy succulent perennial with cespitose ascending stems, opposite glaucous elliptic or cordate leaves, and purple flowers in rather dense terminal corymbs. Native to central Asia.

78956. SEDUM KAMTSCHATICUM Fisch. and Mey. **Orange stonecrop.**

A glabrous perennial succulent with greenish or pinkish branches 10 inches long, deep-green coarsely toothed leaves, and numerous yellow flowers in terminal cymes. Native to eastern Asia.

78957. SEDUM MAXIMUM Suter.
Great stonecrop.

A stout bushy perennial up to 2 feet high, with opposite sessile leaves and whitish flowers in terminal and lateral cymes on long peducles, forming a loose panicle. Native to Europe and northwest Asia.

78958. SEDUM PILOSUM Bieb.

A fleshy perennial of round-compact habit, with small hairy leaves and rose-pink flowers in a panicle. Native to the Caucasus.

78959. SEDUM POPULIFOLIUM Pall.
Poplar stonecrop.

A shrubby glabrous succulent up to 10 inches high, with ovate-acute coarsely toothed leaves 1½ inches long and terminal cymes of pinkish flowers. Native to Siberia.

78960. SEDUM RUPESTRE L.

A succulent perennial 6 to 12 inches high, from western Europe, with glaucous stems and foliage which redden with age. The numerous yellow flowers are in umbellate cymes.

78961. SEDUM SEMENOVII Masters.

An Asiatic succulent with annual stems about a foot high, from a perennial rhizome. The sessile leaves, in six rows, are an inch long, and the whitish flowers are in compact globose terminal cymes.

78962. SEDUM SPURIUM Bieb.

Variety *splendens*. A succulent perennial, native to Asia Minor, with a rosette of cuneate-obovate pubescent leaves and a corymb of flesh-colored flowers, purple veined beneath.

78963. SEDUM TELEPHIUM L.
Liveforever.

An erect fleshy perennial a foot or more high with scattered oblong-ovate leaves and numerous pink, red-spotted flowers in dense terminal and lateral cymes. Native from central Europe to Siberia.

78915 to 78974—Continued.

78964. SEDUM TELEPHIUM BORDERI Masters.

A variety with reddish stems and flat-topped corymbs of pink flowers.

78965 to 78973. SEMPERVIVUM spp. Crassulaceae. **Houseleek.**

78965. SEMPERVIVUM ARENARIUM Koch. **Sand houseleek.**

A succulent European alpine which forms globular rosettes of 60 to 80 bright-green oblanceolate leaves. The pale-yellow flowers are in dense heads.

78966. SEMPERVIVUM BARBATUM C. Smith.

A shrubby succulent with stout stems and flat rosettes of oblong spatulate leaves. The yellow flowers are in rather open panicles. Native to the Canary Islands.

78967. SEMPERVIVUM GLAUCUM Tenore. **Fuzzy houseleek.**

A succulent alpine, native to central Europe, which forms rosettes 2 to 3 inches in diameter, with oblanceolate glaucous leaves and about a dozen pale or bright-red flowers in a short compact panicle on a densely hairy stem about a foot high.

78968. SEMPERVIVUM SANGUINEUM Jeanb.

A low compact reddish hairy succulent alpine with oval-acuminate leaves and small pink flowers in few-flowered clusters on slender stems 5 to 8 inches long. Native to the Pyrenees.

78969. SEMPERVIVUM SCHNITTSPAHNII Lagg.

A succulent alpine, native to Switzerland, with a rosette of narrowly ovate smooth leaves and pink flowers on an upright stem.

78970 to 78972. SEMPERVIVUM TECTORUM L. **Roof houseleek.**

A European herbaceous perennial with rosettes of obovate sharp-pointed thick pale-green leaves having distinct red tips, and densely pilose flowering stems a foot high, bearing branched panicles of pale-red flowers.

78970. Variety *glaucum*.

78971. Variety *pulchrum*.

78972. Variety *robustum*.

78973. SEMPERVIVUM VERLOTI Lamotte.

An alpine succulent with small rosettes of dark-green obovate leaves about an inch long, and 8 to 12 small rose-colored flowers on each peduncle of a branched panicle. Native to western Europe.

78974. VIBURNUM DASYANTHUM Rehder. Caprifoliaceae.

A hardy ornamental shrub 7 feet high from the mountains of western Hupeh, China, where it grows at altitudes of 4,000 to 9,000 feet. The narrow toothed leaves are dark metallic green above, paler beneath, and prominently veined. The flowers are in lax panicles, and the small red berries make the shrub a striking object of beauty in the fruiting season.

78975 to 79052.

From Kew, Surrey, England. Seeds and bulblets presented by Dr. A. W. Hill, Director, Royal Botanic Gardens. Received March 1, 1929.

78975 to 79001. ALLIUM spp. Liliaceae. **Onion.**

78975. ALLIUM BEESIANUM W. W. Smith.

An ornamental western Chinese onion, 9 to 18 inches high, with pendulous blue flowers.

For previous introduction see No. 76204.

78976. ALLIUM BIDWILLIAE S. Wats.

A pink-flowered onion about a foot high, native to the Sierra Madre Mountains, Calif.

For previous introduction see No. 66424.

78977. ALLIUM CARINATUM L.

Bulblets of a species with narrowly linear leaves and lilac-purple flowers, produced in a comparatively large head. It is found throughout southern Europe, especially in the Alps.

For previous introduction see No. 73522.

78978. ALLIUM CAERULEUM Pall.

A wild Russian onion, 2 feet or more high, with linear leaves and attractive light-blue flowers in erect rounded umbels.

78979. ALLIUM CYANEUM Regel.

A rather dwarf plant, less than a foot high, with small heads of pendulous bright-blue flowers. Native to northern China.

For previous introduction see No. 73523.

78980. ALLIUM FISTULOSUM L. **Welsh onion.**

Bulbs of a hardy onion, about 2 feet high, with green and yellow flowers.

For previous introduction see No. 63155.

78981. ALLIUM GIGANTEUM Regel.

One of the tallest members of the genus, becoming 4 feet high. It is native to the Himalayas. The bulbs are large, and the fleshy leaves are about 18 inches in length lying close to the ground. The bright-lilac flowers are in heads 4 inches in diameter.

For previous introduction see No. 58871.

78982. ALLIUM HYMENORRHIZUM Ledeb.

A perennial moisture-loving Russian species with linear leaves and purplish-violet flowers.

For previous introduction see No. 73598.

78983. ALLIUM KARATAVIENSE Regel.

An onion, native to Turkestan, with dense umbels of dull-pink flowers and

78975 to 79052—Continued.

very ornamental broad leaves of a striking blue-green color.

For previous introduction see No. 76335.

78984. ALLIUM MACRANTHUM Baker.

A handsome herbaceous perennial from the eastern Himalayas. The flat leaves are over a foot long, and the mauve-purple flowers are produced in clusters of 50 or more on scapes 2 feet high.

For previous introduction see No. 66429.

78985. ALLIUM NEAPOLITANUM Cirillo.

A southern European species, about 1½ feet high, with flat leaves and very ornamental white flowers, hardy in the South and requiring light perfectly drained soil.

For previous introduction see No. 58877.

78986. ALLIUM ODORUM L.

A European onion, cultivated in Japan for its leaves, which are produced abundantly in the spring and eaten as greens.

For previous introduction see No. 76336.

78987. ALLIUM OSTROWSKIANUM Regel.

A particularly striking species from Turkestan with deep rose-colored flowers produced freely in many-flowered umbels on scapes 12 inches high.

For previous introduction see No. 76208.

78988. ALLIUM OVIFLORUM Regel.

A low bulbous alpine about 2 inches high, with linear leaves up to 20 inches long and violet-purple flowers in a lax umbel. Native to the Himalayas.

78989. ALLIUM PARADOXUM (Bieb.) Don.

Bulblets of a perennial onion, a foot high, with white flowers. Native to Siberia.

For previous introduction see No. 66431.

78990. ALLIUM PENDULINUM Tenore.

An Italian alpine, with linear keeled leaves, and long-peduncled nodding whitish flowers.

78991. ALLIUM SCHOENOPRASUM L. **Chives.**

The sand leek or rocambole of Europe and Asia Minor, which resembles garlic but has smaller bulbs of milder flavor produced at the tip of the stem as well as at its base. Its flowers are dull lavender pink, and the plant is useful in the perennial border.

For previous introduction see No. 68057.

78992. ALLIUM SCORZONERAEFOLIUM DC.

Bulblets of a species of unknown origin, cultivated in European gardens. It has very narrow concave leaves and small yellow flowers in a few-flowered umbel.

For previous introduction see No. 58882.

78993. ALLIUM SENESCENS L.

A wild European onion, 1 to 2 feet high, with narrow, erect, often-twisted leaves and numerous, rather small, pink or lilac flowers in dense heads.

78994. ALLIUM STELLATUM Fraser.

A bulbous plant with 3-angled narrowly linear leaves and terminal umbels of deep-pink flowers on erect scapes. Native to the central United States.

78995. ALLIUM SUBANGULATUM Regel.

A cespitose bulbous plant with semiterete linear leaves and rosy purple flowers borne in a dense rounded umbel at the summit of an erect or ascending scape. Native to central China.

78996. ALLIUM SUBHIRSUTUM L.

A bulbous perennial native to the Mediterranean region with hairy margined narrow leaves a foot high and white flowers.

For previous introduction see No. 76337.

78997. ALLIUM TANGUTICUM Regel.

A hardy bulbous plant, up to 16 inches high, with numerous linear leaves and dense hemispherical umbels of purplish flowers. Native to western China.

78998. ALLIUM URSINUM L.

A wild European onion which grows in large masses in the open woods. When in flower it is very effective, clothing the ground with its broad green leaves, above which the numerous umbels of white flowers are borne on scapes a foot high.

For previous introduction see No. 58690.

78999. ALLIUM VINEALE L.

Bulblets of a pink-flowered wild onion, about a foot high, native to England.

79000. ALLIUM YUNNANENSE Diels.

A cespitose onion, native to southwestern China, with linear leaves about 6 inches long and pink or purplish flowers on scapes 4 to 16 inches long.

For previous introduction see No. 69906.

79001. ALLIUM ZEBDANENSE Boiss. and Noe.

A bulbous plant, 2 feet high, with linear-lanceolate leaves and three to five white flowers in an umbel. Native to Syria.

79002 to 79006. BERBERIS spp. Berberidaceae. **Barberry.**

79002. BERBERIS JULIANAE C. Schneid. **Wintergreen barberry.**

A shrubby evergreen barberry, up to 7 feet high, native to western China. It has thick, 3-cleft spines about 1½ inches long, narrowly oval leathery leaves, and small yellow flowers, followed by blue-black fruits.

78975 to 79052—Continued.

For previous introduction see No. 65599.

79003. BERBERIS LECOMTEI C. Schneid.

A shrub up to 7 feet high, with slender yellowish-brown spines one-half inch long, thin lanceolate leaves, and small yellow flowers. Native to southwestern China.

79004. BERBERIS LYCIUM Royle.

A half-evergreen shrub, 10 feet high, with narrow bright-green leaves and pale-yellow flowers followed by ovoid violet berries. It is native to northern India.

For previous introduction see No. 76215.

79005. BERBERIS ORTHOBOTRYS Bienert.

A semievergreen barberry with very large crimson berries.

For previous introduction see No. 66688.

79006. BERBERIS POLYANTHA Hemsl.

A practically evergreen shrub 6 to 10 feet high, somewhat like *B. aggregata*, with slender simple or 3-pronged thorns, obovate leaves mostly rounded at the apex, and yellow flowers which are produced during June and July in large drooping panicles. The red berries are quickly destroyed by frost. Native to China.

For previous introduction see No. 58140.

79007 to 79011. BRASSICA spp. Brassicaceae. **Mustard.**

79007. BRASSICA BALEARICA Pers.

A wild perennial mustard, native to the Balearic Islands, about 2 feet high, with a woody base.

79008. BRASSICA CAMPESTRIS L.

Rutabaga.

79009. BRASSICA ERUCASTRUM L.

A wild perennial mustard with yellow flowers, native to the mountains of southern Europe.

79010. BRASSICA LAEVIGATA Lag.

An annual mustard up to 8 inches high, with pinnatifid leaves in a basal rosette and small white flowers.

79011. BRASSICA NIGRA (L.) Koch. **Black mustard.**

For previous introduction see No. 45001.

79012. CYTISUS SPACHIANUS (Webb) Kuntze.

A Canary Island shrub, 6 to 8 feet high, with elongated racemes of fragrant bright-yellow flowers.

For previous introduction see No. 76246.

79013. DIANTHUS REQUIENII Godr. **Pink.**

A hardy herbaceous perennial up to 10 inches high, rather stiff linear leaves, and a solitary bright-red flower. Native to the Pyrenees.

79014 to 79016. DIMORPHOTHECA spp. Asteraceae.

78975 to 79052—Continued.

79014. DIMORPHOTHECA AURANTIACA DC. **Winter cape-marigold.**

A South African perennial, somewhat shrubby at times, with thickish oblong or spatulate leaves and large heads of orange-yellow flowers.

79015. DIMORPHOTHECA HYBRIDA (L.) DC. **Cape-marigold.**

A South African composite of variable size and habit. The hairy obovate leaves are 1 to 3 inches long, and the flowers, about 2 inches across, are white above and purple beneath.

79016. DIMORPHOTHECA PLUVIALIS (L.) Moench. **Cape-marigold.**

An erect or diffuse, simple or branched annual from the Cape of Good Hope. The oblong or obovate leaves are hairy, and the flowers, white above and purple beneath, are in terminal heads.

79017 to 79020. ERICA spp. Ericaceae. **Heath.**

79017. ERICA AUSTRALIS L.

An evergreen shrub 2 to 3 feet high, native to Portugal, with small rose-purple flowers.

79018. ERICA SCOPARIA L. **Besom heath.**

An evergreen southern Europe shrub, 10 feet high, with upright branches, small lustrous dark-green linear leaves in whorls of three or four, and long cylindrical spikes of greenish-white flowers.

For previous introduction see No. 78681.

79019. ERICA STRICTA Donn. **Corsican heath.**

For previous introduction and description see No. 78898.

79020. ERICA TETRALIX L. **Crossleaf heath.**

A low shrub with its leaves in whorls of four and umbellate clusters of rosy flowers. Native to western Europe.

79021 to 79028. GENTIANA spp. Gentianaceae. **Gentian.**

79021. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

For previous introduction and description see No. 78858.

79022. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

Variety *alba*. A white-flowered form.

79023. GENTIANA CRUCIATA L. **Cross gentian.**

For previous introduction and description see No. 78931.

79024. GENTIANA FETISOWII Regel and Winkler.

A hardy herbaceous perennial, native to Turkestan, about 6 inches high, with small deep-blue flowers.

79025. GENTIANA FREYNIANA Bornm.

A vigorous species rather close to *Gentiana septemfida*, requiring similar

78975 to 79052—Continued.

conditions and making a good garden plant with fine bright-blue, bell-shaped flowers in late summer.

79026. GENTIANA FRIGIDA Haenke.

An alpine perennial, native to central Europe, scarcely 3 inches high, with opposite, lanceolate, somewhat fleshy leaves about 1 inch long and terminal white flowers marked with blue.

79027. GENTIANA GROMBEZEWSKII Hort.

A place of publication or description for this name has not been found.

79028. GENTIANA TIBETICA King. **Himalayan gentian.**

For previous introduction and description see No. 78939.

79029. IRIS CHRYSOGRAPHES Dykes. Iridaceae. **Goldvein iris.**

One of the handsomest of the Siberian irises; the velvety dark-purple flowers are brightened by golden reticulations at the throat, running into a signal patch in the blade.

For previous introduction see No. 73545.

79030. IRIS MILESII Baker. Iridaeae.

A semievergreen Himalayan iris related to *Iris tectorum* with seven or eight leaves 2 to 3 feet long on the tall flower stem; the latter is branched and bears about four heads of small rosy lilac flowers, more or less spotted with darker magenta.

For previous introduction see No. 67265.

79031. KALMIA CUNEATA Michx. Ericaceae. **Kalmia.**

An erect deciduous shrub with slender straggling stems up to 3 feet long and oblong-oval leaves. The creamy white flowers, with a red band within, are in small lateral umbels. Native to the southeastern United States.

79032. KALMIA POLIFOLIA Wang. (*K. glauca* Ait.). Ericaceae. **Bog kalmia.**

A hardy evergreen shrub, native to Newfoundland, with opposite, narrow-oblong leathery leaves and a terminal corymb of purple flowers.

79033. MUSCARI ARMENIACUM Leichtl. Liliaceae. **Grape-hyacinth.**

A handsome hardy bulbous plant, native to Armenia, with many linear leaves overtopping the racemes of deep-violet flowers. One of the last of the grape-hyacinths to flower.

For previous introduction see No. 66586.

79034. MUSCARI SZOVITSIANUM Baker. Liliaceae. **Grape-hyacinth.**

A bulbous perennial, native to Persia, with leaves 6 inches long and several scapes 5 inches high, bearing clusters of slightly fragrant bright-blue flowers.

79035 to 79038. PAEONIA spp. Ranunculaceae. **Peony.**

79035. PAEONIA ANOMALA L.

A strong-growing, wild Siberian peony 1 to 2 feet high, found on well-drained hillsides. Flowers large and of a pale-rose color; foliage somewhat coarse.

For previous introduction see No. 66593.

79036. PAEONIA ARIETINA Anders.

A European herbaceous peony about 3 feet high, with 5-lobed or 6-lobed leaves and a large solitary dark-red flower.

For previous introduction see No. 67044.

79037. PAEONIA DELAVAYI Franch.

A very attractive vigorous shrub 4 feet high, growing on steep slopes among limestone bowlders and in alpine meadows at altitudes of 10,000 to 13,000 feet. The deep-crimson flowers are 3 inches in diameter. Native to southwestern China.

For previous introduction see No. 55994.

79038. PAEONIA LUTEA Delavay. **Golden peony.**

A shrubby Chinese peony with a short woody stem 1 or 2 feet high and deep-green leathery 3-parted leaves, white beneath, and about a foot in length. The golden-yellow single or slightly double flowers are 2½ inches across.

For previous introduction see No. 67048.

79039. PETTERIA RAMENTACEA (Sieber) Presl. (*Cytisus weldeni* Vis.). Fabaceae.

An upright leguminous shrub, 6 feet or less in height, with trifoliolate leaves and dense upright racemes of fragrant yellow flowers. Native to southern Europe.

For previous introduction see No. 66599.

79040. SORBUS FOLGNERI (C. Schneid.) Rehder (*Pyrus folgneri* Leveille). Malaceae. **Mountain-ash.**

A handsome Chinese tree with gracefully spreading branches and oval leaves, dark-green above and white-hairy beneath. The ovoid red berries are about one-half inch long.

For previous introduction see No. 61990.

79041 to 79043. RHODODENDRON spp. Ericaceae.

79041. RHODODENDRON DECORUM Franch.

A western Chinese shrub with glabrous leaves, glaucous beneath, and broadly bell-shaped white or pink flowers 2 inches across.

For previous introduction see No. 53729.

79042. RHODODENDRON SMIRNOWI Trautv. **Smirnow rhododendron.**

A shrub or small tree, reputed to be hardy, about 20 feet high with dark-green leaves, grayish hairy beneath, and compact heads of rosy red flowers, each about 3 inches across. Native to the Caucasus.

For previous introduction see No. 67373.

79043. RHODODENDRON TSCHONOSKII Maxim.

78975 to 79052—Continued.

A Japanese forest shrub with flaky bark, elliptic leaves one-third inch long, and heads of two to four small white flowers.

79044 to 79046. SEDUM spp. Crassulaceae. **Stonecrop.**

79044. SEDUM ELLACOMBIANUM Praeger.

For previous introduction and description see No. 78954.

79045. SEDUM EWERSII Ledeb. **Ewers stonecrop.**

For previous introduction and description see No. 78955.

79046. SEDUM MIDDENDORFFIANUM Maxim. **Middendorff stonecrop.**

A hardy succulent cespitose perennial up to 16 inches high, with narrow leaves up to 3 inches long, and small yellow flowers in dense cymes. Native to eastern Siberia.

79047. SEMPERVIVUM ASSIMILE Schott. **Houseleek.**

A Rumanian succulent with rosettes of 60 to 80 oblanceolate leaves and pale-rose flower, about three-fourths inch across in cymes on stems about 6 inches high.

79048. SEMPERVIVUM TRISTE Baker. **Houseleek.**

A small fleshy plant which forms rosettes 2 to 3 inches in diameter, composed of oblanceolate leaves, red brown above and drab green beneath. The stem leaves are red brown throughout. The bright-red flowers, an inch across, are in a panicle 6 inches long. Country of origin unknown.

79049. STRANVAESIA DAVIDIANA SALICIFOLIA (Hutchinson) Rehd. Malaceae.

A rosaceous shrub, closely related to *Stranvaesia undulata*, from which it differs in its narrower, willowlike leaves and its fruits, which are red, not orange like those of *S. undulata*. The small white flowers are in terminal clusters. It comes from western China and is hardy in southeastern England.

For previous introduction see No. 62392.

79050 to 79052. SYRINGA spp. Oleaceae. **Lilac.**

79050. SYRINGA PINETORUM W. W. Smith.

A hardy spreading ornamental shrub, 10 feet high, from western China. Somewhat like *Syringa microphylla*, with rosy lavender flowers.

79051. SYRINGA SWEGINZOWII Koehne and Ling. **Chengtu lilac.**

An attractive hardy lilac, about 10 feet high, from western China. The dark-green, oval leaves are 2 to 4 inches long, and the fragrant, rosy lilac flowers are borne in June in terminal panicles up to 10 inches in length.

For previous introduction see No. 63584.

79052. SYRINGA VILLOSA Vahl. **Late lilac.**

A bushy lilac about 8 feet high, with stout, upright branches, broadly oval, bright-green leaves, and pinkish-lilac flowers in panicles 3 to 7 inches long. Native to China and the Himalayas.

For previous introduction see No. 76044.

79053 to 79111.

From Ipswich, England. Seeds purchased from Thompson & Morgan. Received February 28, 1929.

79053 to 79055. CYCLAMEN spp. Primulaceae.

79053. CYCLAMEN EUROPAEUM L. **European cyclamen.**

A low, more or less evergreen European perennial with a tuberous root, rounded or kidney-shaped leaves white marbled above and purplish beneath, and fragrant bright-red flowers on scapes 4 or 5 inches high in autumn.

79054. CYCLAMEN MACROPHYLLUM Sieber.

A low tuberous-rooted perennial, native to southern Europe, with large cordate, crenate leaves usually mottled with white, and in autumn white flowers on scapes 6 inches high.

79055. CYCLAMEN NEAPOLITANUM Tenore. **Neapolitan cyclamen.**

A low perennial, 3 inches high, arising from a large black tuber. The deep-pink or rarely white flowers are borne in autumn. Native to Italy.

For previous introduction see No. 73535.

79056 to 79058. DAPHNE spp. Thymelaeaceae.

79056. DAPHNE ALPINA L. **Alpine daphne.**

An erect European alpine shrub 2 feet high, with narrow deciduous leaves and fragrant white or pinkish flowers in terminal clusters.

79057. DAPHNE LAUREOLA L.

A shrub, up to 4 feet high, with shining dark-green leaves about 3 inches long and yellowish-green flowers in nearly sessile racemes. Native to southern Europe and western Asia.

79058. DAPHNE STRIATA Tratt.

A dwarf evergreen alpine shrub with small, wedge-shaped narrow leaves and pink flowers in many-flowered terminal heads. Native to Switzerland.

79059. DIGITALIS ISABELLINA Hort. Scrophulariaceae. **Foxglove.**

A new hybrid of *Digitalis purpurea*, with pinkish-yellow flowers, of the hue of *Lilium testaceum*.

79060 to 79062. ERICA spp. Ericaceae. **Heath.**

79060. ERICA CINEREA COCCINEA Bean.

A very striking variety with red, almost scarlet, flowers, but less vigorous than the type.

79061. ERICA STRICTA Donn. **Corsican heath.**

For previous introduction and description see No. 78898.

79062. ERICA VAGANS L. **Cornish heath.**

79053 to 79111—Continued.

For previous introduction and description see No. 78899.

79063 to 79095. GENTIANA spp. Gentianaceae. **Gentian.**

79063. GENTIANA GENTIANELLA A. T. Johnson. **Stemless gentian.**

For previous introduction and description see No. 78857.

79064. GENTIANA ALPINA Vill.

An almost stemless alpine plant, native to central Europe, with small glistening gray-green leaves curving inward and imbricated, forming rosettes, and dark-blue flowers resembling in general style those of *G. gentianella*.

79065. GENTIANA ANGULOSA Bieb.

A tufted alpine, native to the Caucasus, with narrowly oval leaves and solitary bowl-shaped blue flowers, of the type of *G. verna*, but much larger.

79066. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

For previous introduction and description see No. 78858.

79067. GENTIANA BAVARICA L.

For previous introduction and description see No. 78859.

79068. GENTIANA BRACHYPHYLLA Vill.

A high alpine perennial, native to central Europe, forming spreading tufts with small round leaves and brilliant-blue flowers of the general type of *G. verna*, appearing in late summer.

79069. GENTIANA CALYCOSA Griseb.

A perennial about a foot high, with ovate leaves three-fourths of an inch long, and dark-blue, usually solitary, flowers. Native to northwestern North America.

79070. GENTIANA CLUSH Perr. and Song.

A low stemless perennial, possibly a form of *G. vulgaris*, with rosettes of leathery leaves and dark-blue flowers. Native to the Alps.

79071. GENTIANA CRUCIATA L. **Cross gentian.**

For previous introduction and description see No. 78931.

79072. GENTIANA DAHURICA Fisch.

A rather unattractive Siberian gentian about a foot high, with an ascending stem, linear-lanceolate leaves about 3 inches long, and sessile terminal dark-blue flowers 1½ inches long. Introduced for comparative study only.

79073. GENTIANA DETONSA Rottb.

A biennial gentian native to the cold regions of northwestern Asia, related to *G. crinita*, with a very short stem and oblong leaves arranged more or less in a basal rosette. The flowers, borne singly, are deep blue, with the corolla lobes wavy at the tips.

For previous introduction see No. 55274.

79074. GENTIANA FARRERI Balf. f.

A perennial, native to the mountains of western China, with thick roots and numerous freely rooting stolons which form wide-spreading masses. The thick opposite leaves are about half an inch long, and the solitary terminal flowers, which are so freely produced as to cover the plant, are blue with a white throat.

79075. GENTIANA FREYNIANA Borum.

For previous introduction and description see No. 79025.

79076. GENTIANA KESSELRINGI Regel.

A plant about 8 inches high, with whitish flowers dotted purple on the outside, useful for comparative study only. Native to Turkestan.

79077. GENTIANA KOCHIANA Perr. and Song.

An alpine gentian belonging to the Acaulis group, from central Europe with large flat thin light-green leaves and dark-blue flowers with five blackish-green spots on the throat. Some forms have been reported from the limestone regions.

79078. GENTIANA KURROO Royle.

A Himalayan gentian forming dense tufts from which rise lax stems up to 7 inches high with narrowly lanceolate leaves and bell-shaped blue flowers spotted with white inside. It is said to appreciate a sunny location, with ample moisture and perfect drainage, especially in spring and autumn.

79079. GENTIANA LAGODECHIANA Hort.

For previous introduction and description see No. 78860.

79080. GENTIANA MACROPHYLLA Pall.

A herbaceous perennial, native to northern Europe and Asia, with an erect or ascending stem, narrow spreading leaves, and clustered heads of dark-blue flowers. For comparative study only.

79081. GENTIANA NIVALIS L.

A slender annual about 3 inches high, native to Scotland, with small obovate leaves and solitary blue flowers appearing in late summer.

79082. GENTIANA PARRYI Engelm.

An alpine gentian up to 9 inches high, with large dark-purple flowers contrasting attractively with the broad pale-green leaves. It is said to need conditions similar to those required by *G. septemfida*.

79083. GENTIANA PHLOGIFOLIA Schott and Kotschy.

For previous introduction and description see No. 78933.

79084. GENTIANA PNEUMONANTHE L.

An erect perennial with many slender stems, dark narrow leaves, and dark-blue flowers in a cymelike raceme. Native to the mountain marshes in central Europe.

79085. GENTIANA PROLATA Balf. f.

A stoloniferous perennial with erect branches about 2 inches long, small succulent leaves, and a terminal blue flower about 2 inches long. Native to Sikkim.

79053 to 79111—Continued.

79086. GENTIANA PRZEWALSKII Maxim.

A lax-growing, free-flowering gentian from western China, rather like *G. kurroo*, with linear leaves about 6 inches long and flowers with nearly white tubes and cobalt-blue petals.

79087. GENTIANA PUNCTATA L.

A rather tall herbaceous perennial, native to central Europe, with yellow flowers spotted with brown, resembling but inferior to *G. lutea*.

79088. GENTIANA PURDOMI Hort.

A showy Asiatic gentian allied to but better than *G. przewalskii*, with rosettes of narrow glossy leaves, from which radiate prostrate stems each carrying about a dozen bright-blue flowers.

79089. GENTIANA PURPUREA L.

For previous introduction and description see No. 78934.

79090. GENTIANA SCABRA Bunge..

A hardy herbaceous perennial requiring conditions similar to those needed by *G. septemfida*. It has an erect stem a foot or less high, oval-oblong dark-green leaves, and terminal flowers an inch long. Native to Turkestan.

79091. GENTIANA SEPTEMFIDA Pall.

For previous introduction and description see No. 78861.

79092. GENTIANA SETIGERA A. Gray.

A rather stout perennial, with a thick root, 7 to 10 pairs of leaves, and blue flowers 1½ inches long. Native to California.

79093. GENTIANA STRAMINEA Maxim.

A prostrate perennial, native to western China, with attractive blue flowers.

79094. GENTIANA VERNA L.

For previous introduction and description see No. 78862.

79095. GENTIANA WALUJEWI Regel and Schmalh.

A dwarf gentian, native to Sinkiang, China, with white blue-spotted flowers.

79096. IRIS CHRYSOPHYLLA Howell. **Iris.**

An iris with low slender leafy stems 2 to 8 inches high, from slender rootstalks, linear leaves, and one to three yellow to white flowers 2 to 3 inches long. Native to southern Oregon in pine woods.

79097 to 79111. PRIMULA spp. Primulaceae. **Primrose.**

79097. PRIMULA APOCLITA Balf. and Forr.

A Tibetan primrose of the Muscarioides section, with a rosette of papery, oblong-spatulate leaves, and purplish-blue flowers borne on a scape 6 inches high.

79098. PRIMULA BURMANICA Balf. and Ward.

A stout moisture-loving primrose from western China, with oblanceolate leaves up to a foot long and reddish-purple flowers borne on a scape 2 feet high. It is a member of the Candelabra section.

79099. PRIMULA CHIONANTHA Balf. and Forr.

For previous introduction and description see No. 78913.

79100. PRIMULA CHRYSOPA Balf. and Forr.

A tufted perennial marsh-loving primrose from southwestern China, where it grows in moist stony alpine meadows. It has oblong, bright-green, somewhat fleshy, long-stemmed leaves and very attractive fragrant flowers borne in 2-flowered to 4-flowered umbels on the summit of the slender scape. The calyx is green or purplish and the oblique corolla pale lilac with a golden eye. The entire plant is more or less covered with a white mealy powder. This is a member of the Farinosae section.

For previous introduction see No. 56019.

79101. PRIMULA CONSPERSA Balf. and Purd.

A primrose from western China with linear-ovate leaves 4 to 6 inches long, and rose-pink flowers in whorls of about 12, on scapes a foot high. It is one of the Farinosae section.

79102. PRIMULA CYANANTHA Balf. and Forr.

A western Chinese primrose about a foot high, with papery oval-oblong leaves about 3 inches long in a rosette and intensely dark-blue fragrant flowers in a many-flowered terminal cluster. One of the Muscarioides section.

79103. PRIMULA FLORINDAE K. Ward.

A Tibetan primrose about 3 feet high, one of the Sikkimensis section, with cowslip-yellow fragrant flowers in an immense cluster of 60 to 80 flowers. The very large leaves resemble those of *Caltha palustris*, and the plant grows in running streams.

79104. PRIMULA GLYCOSMA Petitm.

A strong-growing primrose of the Candelabra section, native to boggy situations in western China. The deep-purple flowers have golden centers.

79105. PRIMULA HELODOXA Balf.

For previous introduction and description see No. 78866.

79106. PRIMULA LICHIANGENSIS Forrest.

A handsome primrose of the Cortusoides section, from southwestern China, where it reaches a height of 6 to 14 inches, growing on ledges and bowlders in dry shady places. The fragrant flowers vary from rose to almost crimson, with greenish-yellow eyes. The foliage is very variable.

79107. PRIMULA LITTONIANA Forrest.

A very handsome plant, 2 to 3 feet tall, growing in swampy meadows in southwestern China at altitudes between 10,000 and 11,000 feet. It is one of the Muscarioides section. The

79053 to 79111—Continued.

pendent deep indigo-blue flowers are borne in long densely packed spikes, and the rich crimson calyxes are very striking.

For previous introduction see No. 59428.

79108. PRIMULA LITTONIANA Forrest.

Variety *grandiflora*. A giant form with spikes 8 inches long.

79109. PRIMULA NUTANS Delav.

A Chinese primrose 9 to 20 inches high, of the Muscarioides section, with obovate or oblanceolate hairy leaves, and clear-blue fragrant flowers in a terminal cluster.

79110. PRIMULA SIKKIMENSIS Hook.

For previous introduction and description see No. 78868.

79111. PRIMULA SMITHIANA Craib.

A perennial alpine primrose of the Candelabra section, with tall stems and whorls of soft-yellow flowers; very similar to *P. bulleyana*. Native to the Himalayas.

79112 to 79147.

From San Francisco, Calif. Seeds presented by John McLaren, Superintendent, Golden Gate Park. Received January 15, 1929.

79112. ACTINOTUS LEUCOCEPHALUS Benth. Apiaceae.

This Western Australian flannel flower is an erect much-branched herbaceous perennial about 2 feet high, entirely clothed in soft silky hairs. The leaves are divided into three linear segments which are again three lobed, and the flowers are numerous in densely packed umbels.

79113 to 79120. BANKSIA spp. Proteaceae.

79113. BANKSIA ATTENUATA R. Br.

An evergreen tree up to 40 feet high, native to Western Australia, with serrate linear leaves 6 inches long, densely white tomentose underneath, and cylindrical spikes of small flowers united into a thick woody cone from which the silky fruits eventually protrude.

79114. BANKSIA BAXTERI R. Br.

A tall evergreen shrub 8 to 10 feet high, with the leaves 3 to 4 inches long, divided into ovate-triangular segments, and nearly globular flower spikes, 2 to 3 inches in diameter, covered with long fine hairs. Native to Western Australia.

79115. BANKSIA COCCINEA R. Br.

An erect evergreen shrub 15 feet high, native to Western Australia, with broadly ovate leaves 3 inches long and brilliant red flowers an inch long, in globose heads 2 inches in diameter.

For previous introduction see No. 76636.

79116. BANKSIA LEMANNIANA Meisn.

An evergreen shrub with tomentose branches, flat regularly toothed, obovate-oblong leaves 3 inches long, loosely tomentose underneath, and globular to oblong dense flower heads 4 inches long.

79112 to 79147—Continued.

79117. BANKSIA OCCIDENTALIS R. Br.

An erect evergreen shrub up to 8 feet high, native to Western Australia, with glabrous branches, linear leaves 2 to 4 inches long, three toothed at the end and white underneath, and red flowers in ovoid to cylindrical clusters 3 to 6 inches long.

79118. BANKSIA PRIONOTES Lindl.

A Western Australian evergreen tree up to 30 feet high, with thick tomentose branches. The leaves, 8 to 12 inches long, are divided into regular sharp-pointed lobes, and the thick golden flower spikes are 5 inches long.

79119. BANKSIA SPECIOSA R. Br.

A tall evergreen shrub, native to Western Australia, with leaves a foot long, divided into numerous rounded triangular lobes and white tomentose beneath, and thick oblong yellow flower spikes 5 inches long.

79120. BANKSIA VERTICILLATA R. Br.

A small Western Australian tree with tomentose branchlets, nearly entire oblong or broadly linear leaves in whorls of four to six, and yellow flowers in cylindrical spikes 8 inches long.

79121. CASSIA PLEUROCARPA F. Muell. Caesalpiniaceae.

A tall erect Australian shrub with four or five rather distinct pairs of thick oblong leaflets and loose racemes of yellow flowers.

For previous introduction see No. 64479.

79122. CHAMAELAUCIUM CILIATUM Desf. Myrtaceae.

An erect bushy heathlike shrub 2 feet high, native to Western Australia, with very small linear terete leaves and very small shell-pink flowers clustered in the axils of the leaves at the ends of the branches.

79123. COMESPERMA SPINOSUM F. Muell. Polygalaceae.

A rigid much-branched spiny evergreen shrub, native to Western Australia, with the leaves reduced to small scales and the small flowers scattered along the branches.

79124. CONOSTYLIS DRUMMONDII Benth. Amaryllidaceae.

A woolly densely tufted herbaceous perennial, native to Western Australia, with rigid linear-terete leaves 6 to 9 inches long and several scapes bearing heads of small yellow flowers.

79125. DAVIESIA CORDATA J. E. Smith. Fabaceae.

An erect evergreen shrub 2 to 3 feet high, with elongated angled branches, ovate coriaceous leaves 3 to 4 inches long, having deeply cordate clasping bases, and axillary umbels of yellow and purple pea-shaped flowers. Native to Western Australia.

79126. GREVILLEA ERIOSTACHYA Lindl. Proteaceae.

A stout erect evergreen shrub 3 to 6 feet high, native to Western Australia, with narrowly linear leaves 8 inches long, usually pinnately divided into three to five segments, and small orange flowers in densely tomentose 1-sided racemes 6 inches long.

79112 to 79147—Continued.

79127 to 79129. GASTROLOBIUM spp. Fabaceae.

These are all reported to be poisonous to livestock.

79127. GASTROLOBIUM CALYCINUM Benth.

An erect glabrous evergreen shrub 2 feet high, native to Western Australia, with rigid coriaceous sharp-pointed oblong to lanceolate leaves 2 inches long, and axillary and terminal racemes of rather large yellow and purple pea-shaped flowers.

79128. GASTROLOBIUM EPACRIDIOIDES Meisn.

A tall evergreen shrub with wand-like loosely villous branches, coriaceous spreading ovate leaves one-half inch long, and loose axillary clusters of yellow and purple pea-shaped flowers. Native to Western Australia.

79129. GASTROLOBIUM VILLOSUM Benth.

A softly tomentose decumbent evergreen shrub, 2 to 4 feet high, native to Western Australia, with opposite ovate leathery leaves 2 inches long and terminal racemes, 4 inches long, of orange and purple pea-shaped flowers.

79130. GREVILLEA POLYBOTRYA Meisn. Proteaceae.

An erect evergreen shrub, native to North Australia and Western Australia, with entire oblong leaves sprinkled with shining silvery hairs when young, but pale and glabrous when mature. The large dense leafless panicles are made up of tomentose cylindrical spikes of small flowers.

79131. HEMIGENIA CANESCENS (Bartl.) Benth. Menthaceae.

A Western Australian evergreen shrub, 2 feet high, clothed with long loose silky white pubescence, with thick soft spreading or recurved obovate leaves half an inch long, and small axillary 2-lipped pink or purple flowers.

79132. HEMIGENIA INCANA (Lindl.) Benth. Menthaceae.

An evergreen undershrub 2 to 3 feet high, native to Western Australia, covered with short appressed silky hairs, with oblong leaves 2 inches long and racemes of pink or purple flowers.

79133. JACKSONIA DECUMBENS Pritz. Fabaceae.

A low evergreen shrub with long decumbent branches, erect broadly linear cladodes, and rather large hairy yellow flowers borne singly or in small clusters at the tips of the branches.

79134. KUNZEA MICRANTHA Schauer. Myrtaceae.

A small erect evergreen shrub, native to Western Australia, with flat rigid linear leaves one-fourth inch long and dense terminal globular heads of small flowers.

79135. KUNZEA SERICEA (Labill.) Turcz. Myrtaceae.

A tall evergreen shrub, native to Western Australia, with rigid tortuous branches, silvery white very stiff leaves

79112 to 79147—Continued.

less than an inch long, and yellowish flowers, either solitary or in terminal clusters.

For previous introduction see No. 64488.

79136. LESCHENAULTIA BILOBA Lindl. Goodeniaceae.

An evergreen shrub 2 to 3 feet high, native to Western Australia, with slender scattered leaves one-half inch long. The flowers are either in small clusters in the upper axils or borne in large leafy terminal clusters. The corolla, about an inch long, has spreading dark-blue wings marked with parallel transverse veins, and the sepals are narrow like the leaves.

For previous introduction see No. 58674.

79137. MELALEUCA ELLIPTICA Labill. Myrtaceae.

A tall evergreen shrub, native to Western Australia, with elliptical evergreen leaves one-half inch long, and cylindrical spikes of large showy red flowers.

79138. MELALEUCA sp. Myrtaceae.

An evergreen Australian shrub with red flowers.

79139. OLEARIA PAUCIDENTATA F. Muell. Asteraceae.

An evergreen undershrub 3 feet high, native to Western Australia, with oblanceolate leaves 1 inch long and small asterlike flower heads in terminal panicles.

79140. OXYLOBIUM CAPITATUM Benth. Fabaceae.

An evergreen undershrub 3 feet high, native to Western Australia, with rigid branches, oblong to linear leaves 2 inches long, and axillary clusters or compact terminal racemes of small yellow pea-shaped flowers.

79141. PATERSONIA XANTHINA F. Muell. Iridaceae.

A herbaceous perennial, native to Western Australia, with a short stem, a rosette of linear leaves 2 feet long, and a spike of yellow irislike flowers with outer segments 1 inch long and very small inner segments.

79142. PIMELEA PREISSII Meisn. Thymelaeaceae.

An erect slender shrub 2 feet high, native to Western Australia, with opposite linear-lanceolate leaves one-half inch long and globular silky villous heads of small flowers.

79143. SCAEVOLA PLATYPHYLLA Lindl. Goodeniaceae.

An erect perennial, native to Western Australia, woody at the base with rigid herbaceous branches, ovate-sessile clasping leaves 2 inches long, and large silky winged white flowers in terminal leafy spikes.

79144. SCAEVOLA STRIATA R. Br. Goodeniaceae.

A diffuse hispid herbaceous perennial, 1 to 2 feet high, native to Western Australia, with coarsely toothed obovate

79112 to 79147—Continued.

leaves and axillary flowers 1 inch long having broad wings elegantly marked with transverse veins.

79145. SCHEFFLERA ACTINOPHYLLA (Endl.) Harms (*Brassaia actinophylla* Endl.). Araliaceae.

A handsome umbrella-shaped evergreen tree up to 40 feet high, native to Queensland, with compound leaves made up of 6 to 16 leathery oblong leaflets 1 foot long, and racemes several feet long of small heads of angled dry fruits.

79146. SOLANUM ELLIPTICUM R. Br. Solanaceae.

A densely stellate pubescent undershrub, native to Australia, either low and spreading or tall and erect, with ovate sinuate-margined leaves 3 inches long and lateral racemes of violet flowers.

79147. STENOCARPUS CUNNINGHAMII R. Br. Proteaceae.

A tall bushy evergreen shrub or small tree, native to North Australia, with oblong-lanceolate leaves 2 to 4 inches long and axillary umbels of 10 to 30 small red or yellow slightly irregular flowers less than one-half inch long.

79148 and 79149. ZELKOVA spp. Ulmaceae.

Varieties growing near the United States Department of Agriculture, Washington, D. C. Scions collected by Paul Russell, Bureau of Plant Industry. Received March 6, 1929.

79148. ZELKOVA SERRATA (Thunb.) Makino (*Z. acuminata* Planch.). **Sawleaf zelkova.**

A handsome Japanese tree up to 90 feet high, with a short trunk dividing into many upright spreading branches and forming a broad round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or on young shoots up to 8 inches long.

For previous introduction see No. 35301.

79149. ZELKOVA CARPINIFOLIA (Pall.) Dipp. (*Z. ulmoides* C. Schneid.).

A tree up to 75 feet high, native to the Caucasus region, with crenately serrate dark-green obovate leaves 2 to 6 inches long, resembling those of the hornbeam.

79150 to 79184.

From Paris, France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History. Received March 9, 1929.

79150. ALOE ANDRINGITRENSIS Perrier. Liliaceae.

A stemless aloe, native to central Madagascar, with a rosette of 12 to 18 subfalcate leaves about 17 inches long. The leaves have horny margins and are armed with very small marginal spines. The dark orange-red flowers are in dense racemes about 4 inches long.

For previous introduction see No. 77885.

79151. BERBERIS ANGULOSA Wall. Berberidaceae. **Barberry.**

For previous introduction and description see No. 78915.

79150 to 79184—Continued.

79152. BERBERIS MORRISONENSIS Hayata. Berberidaceae. **Barberry.**

A barberry closely resembling *Berberis dictyophylla*. It is an erect, densely branched shrub with 3-parted, spined, and fascicled leathery oval leaves. Unlike *B. dictyophylla*, the berries are in fascicles and are more nearly round.

For previous introduction see No. 66687.

79153. COTYLEDON UMBILICUS L. Crassulaceae. **Navelwort.**

A perennial, fleshy plant, native to western Europe, which grows about a foot high and has succulent, orbicular leaves and pendulous racemes of yellowish-green flowers.

For previous introduction see No. 65006.

79154. DIMORPHOTHECA PLUVIALIS (L.) Moench. Asteraceae. **Cape-marigold.**

For previous introduction and description see No. 79016.

79155 to 79158. ERICA spp. Ericaceae.

79155. ERICA CILIARIS L. **Fringed heath.**

For previous introduction and description see No. 78894.

79156. ERICA CINEREA L. **Twisted heath.**

For previous introduction and description see No. 78680.

79157. ERICA TETRALIX L. **Crossleaf heath.**

For previous introduction and description see No. 79020.

79158. ERICA VAGANS L. **Cornish heath.**

For previous introduction and description see No. 79062.

79159 to 79163. GENTIANA spp. Gentianaceae. **Gentian.**

79159. GENTIANA ANGUSTIFOLIA Michx.

A slender ascending mostly unbranched plant, 4 to 16 inches high, with rigid linear or oblanceolate leaves and azure-blue flowers from 1½ to 2½ inches long. Native to the southern United States.

79160. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

For previous introduction and description see No. 78858.

79161. GENTIANA CAMPESTRIS L.

A low slender annual, native to Europe, with an erect stem 2 to 6 inches high, sessile narrow-oval leaves, and clusters of dark purplish-blue flowers.

79162. GENTIANA CRUCIATA L. **Cross gentian.**

For previous introduction and description see No. 78931.

79163. GENTIANA PNEUMONANTHE L.

For previous introduction and description see No. 79084.

79164 to 79173. KALANCHOE spp. Crassulaceae. **Kalanchoe.**

79150 to 79184—Continued.

79164. KALANCHOE ALICIAE Hamet.

A stout, erect, hairy succulent with opposite roundish or oval crenate leaves and rather large flowers in branched cymes. Native to central Madagascar.

For previous introduction see No. 78433.

79165. KALANCHOE AROMATICA Perrier.

A succulent perennial, native to Madagascar, characterized by being covered throughout with viscous red glands and by having a strong aromatic odor. The leaves are triangular-lanceolate, and the small flowers, greenish yellow with red lines, are in terminal cymes.

79166. KALANCHOE CRENATA Haw.

A succulent perennial, native to tropical Africa, 2 to 6 feet high, with a thick fibrous root, oblong or roundish oval crenate leaves about 2 inches long, and bright-yellow flowers one-half inch long, in terminal and axillary cymes.

79167. KALANCHOE CRENATA × FELTHAMENSIS.

Kalanchoe felthamensis is said to be a hybrid of *K. flammea* and *K. kirkii*.

79168. KALANCHOE DAIGREMONTIANA Ham. and Perr.

A brownish-green succulent perennial, native to Madagascar, becoming about 2 feet high. The leaves are petiolate, sometimes peltate, green within, barred with brown, deeply crenate with plants from the angles. The small pink flowers are in lax terminal panicles.

For previous introduction see No. 78426.

79169. KALANCHOE GASTONIS-BONNIERI Ham. and Perr.

During the nonblooming periods this succulent, native to Madagascar, is a low plant with a very short stem and a rosette of light-green crenate leaves. When about to flower the stem elongates to a height of nearly 2 feet, bearing at its summit a lax corymb of light-pink flowers.

For previous introduction see No. 78428.

79170. KALANCHOE GLOBULIFERA COCCINEA Perrier.

A stout-branched succulent perennial up to a foot high, with elongated, thick, irregularly toothed obovate-spatulate leaves over 2 inches long, and numerous red flowers in large terminal corymblike cymes. Native to Madagascar.

79171. KALANCHOE HILDEBRANDTII Baill.

A woody succulent, native to Madagascar, with dense cymes of small yellow flowers.

79172. KALANCHOE SYNSEPALA Baker.

An erect succulent perennial, native to central Madagascar, with the lower leaves opposite, sessile, oblong-spatulate, and green with a red margin. The small reddish flowers are in dense terminal cymes.

79150 to 79184—Continued.

For previous introduction see No. 78431.

79173. KALANCHOE ORGYALIS Baker.

An erect succulent perennial with stems 6 to 7 feet long, oblong-spatulate leaves 3 to 5 inches long, and yellow flowers one-third inch long in dense terminal cymes. Native to central Madagascar.

79174. KITAIBELIA VITIFOLIA Willd. Malvaceae.

A tall hardy herbaceous perennial, up to 8 feet high, with maplelike leaves and showy white or rose-colored axillary flowers. Native to Czechoslovakia.

79175. NOTHOSCORDUM FRAGRANS (Vent.) Kunth. Liliaceae.

A bulbous plant, native to tropical America, closely related to the onion. The bulb is round and yellowish white, and the linear, obtuse leaves are 8 to 12 inches long. The fragrant flowers, white flushed with pink, have purplish stamens and anthers and are borne on a scape 20 inches high.

For previous introduction see No. 66096.

79176. ORNITHOGALUM LONGEBRACTEATUM Jacq. Liliaceae. **Star-of-Bethlehem.**

A bulbous plant, native to South Africa, with five or six fleshy, very narrow leaves 1 to 2 feet long and a dense raceme of whitish flowers on a scape about 2 feet long.

For previous introduction see No. 66964.

79177. ORNITHOGALUM PYRENAICUM L. Liliaceae. **Star-of-Bethlehem.**

A bulbous plant, about 2 feet high, with greenish flowers, native to Europe.

For previous introduction see No. 69930.

79178. PASSIFLORA CAERULEA L. Passifloraceae. **Bluecrown passionflower.**

A slender strong-growing vine, native to Brazil, with leaves divided into five to seven lanceolate segments and fragrant greenish white flowers 4 inches across. The rays of the crown are blue at the tip, white in the middle, and purple at the base, while the styles are light purple.

For previous introduction see No. 30902.

79179. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

A tree sometimes 100 feet high, native to China, with the bark exfoliating in large scales, leaving light-colored areas and on old trees becoming chalky white.

For previous introduction see No. 62470.

79180. RUSCUS ACULEATUS L. Convallariaceae. **Butchersbroom.**

A rigid evergreen shrub, native to Europe, 2 to 4 feet high, with branching grooved stems and sessile ovate cladodes replacing the leaves. The small white flowers are borne in the axil of a bract in the middle of each cladode and are followed by ovoid red berries one-half inch in diameter.

79150 to 79184—Continued.

For previous introduction see No. 68148.

79181. SEDUM DASYPHYLLUM L. Crassulaceae. **Leafy stonecrop.**

For previous introduction and description see No. 78953.

79182 to 79184. SEMPERVIVUM spp. Crassulaceae.

79182. SEMPERVIVUM ARACHNOIDEUM L. **Spiderweb houseleek.**

A fleshy perennial, native to southern Europe, with a barren rosette about three-fourths inch in diameter, composed of about 50 oblong wedge-shaped, pale-green leaves. The bright-red flowers are in a small dense panicle on a stem 3 to 4 inches high.

79183. SEMPERVIVUM ARVERNENSE Lecoq and Lamotte. **Houseleek.**

A succulent perennial, native to France, which forms barren rosettes about 2 inches in diameter and is copiously stoloniferous. The short thick leaves are pale green, and the pale-pink flowers are borne in a panicle 5 inches long and broad, on a stem about 5 inches high.

79184. SEMPERVIVUM HAWORTHII Salm-Dyck. **Houseleek.**

A succulent evergreen perennial with a woody stem and yellow flowers. Native to the Canary Islands.

79185 to 79341.

From Chêne-Bourg, Geneva, Switzerland. Seeds purchased from Henry Correvon, Floraire Nurseries. Received March 5, 1929.

79185. BERBERIS FARRERI Hort. Berberidaceae. **Barberry.**

79186 to 79198. CYCLAMEN spp. Primulaceae.

79186. CYCLAMEN AFRICANUM Boiss. and Reut.

A summer-blooming tuberous perennial with coarsely toothed kidney-shaped or heart-shaped leaves dull and pale green marbled above, and nearly white, purple-tinged flowers an inch long. It is native to Algeria.

79187. CYCLAMEN ATKINSII T. Moore.

A hybrid between *Cyclamen coum* and *C. ibericum*. The leaves are reniform and dark green, spotted white, and the pale-rose or white flowers are usually lined or spotted red.

79188. CYCLAMEN BALEARICUM Willk.

A tuberous-rooted perennial with long-stemmed oval, heartshaped leaves, dark green and white mottled above. The flowers, white and rose colored, are about three-fourths inch long. It is native to the Balearic Islands.

79189. CYCLAMEN CILICICUM Boiss. and Heldr.

A herbaceous perennial native to Sicily. It closely resembles *C. europaeum*, but the larger pale-rose flowers are stained purple at the mouth.

79190 and 79191. CYCLAMEN COUM Mill.

A spring-blooming tuberous-rooted plant, native from southeastern Europe to Persia, about 6 inches high, with rounded-reniform uniformly green leaves and small scentless purple flowers.

79185 to 79341—Continued.

79190, 79191.

79192. CYCLAMEN EUROPAEUM L. **European cyclamen.**

For previous introduction and description see No. 79053.

79193. CYCLAMEN GRAECUM Link.

An autumn-flowering perennial with obcordate irregularly dentate leaves and white or light-rose flowers with a deep-purple base. Native to southeastern Europe.

79194 and 79195. CYCLAMEN HEDERAEFOLIUM Ait.

79194. A herbaceous perennial with a large black tuber, hastate or kindey-shaped leaves with wavy edges, and pink or rarely white flowers. It is native to southwestern Europe.

79195. Variety *album*. A white-flowered form.

79196. CYCLAMEN IBERICUM Stev.

A dwarf herbaceous perennial, native to the Caucasus region, with oval-rounded leaves zoned with white above and purple flowers with darker colored throats.

79197. CYCLAMEN JOVIS Hildebrand.

A low herbaceous perennial with a large black tuber, native to Asia Minor. The leaves vary in shape from hastate to rounded-reniform, and the slender flowers are pink or rarely white.

79198. CYCLAMEN REPANDUM Sibth. and Smith.

A spring-flowering tuberous-rooted plant with cordate undulate-lobed leaves and showy purple flowers. Native to the Mediterannean countries.

79199 to 79213. DAPHNE spp. Thymelaeaceae.

79199. DAPHNE ACUTILOBA Rehder.

A shrub, native to western China, about 5 feet high, with leathery lanceolate leaves 1 to 3 inches long and fragrant white flowers one-half inch long in few-flowered heads.

79200. DAPHNE ALPINA L. **Alpine daphne.**

For previous introduction and description see No. 79056.

79201. DAPHNE MEZEREUM L. **February daphne.**

Variety *autumnalis*. A form with large purple flowers, often blooming in the fall.

79202. DAPHNE OLEOIDES Schreb. (*Daphne buxifolia* Vahl). **Olive daphne.**

An evergreen shrub, native to southeastern Europe, up to 3 feet high, with pubescent branches, hairy obovate-lanceolate leaves, and white or pale-lilac flowers in few-flowered heads.

79203. DAPHNE CAUCASICA Pall. **Caucasian daphne.**

79185 to 79341—Continued.

A hardy deciduous shrub, up to 4 feet high, with lanceolate leaves and fragrant white flowers in terminal heads of 3 to 20 flowers. Native to the Caucasus region.

For previous introduction see No. 38420.

79204. DAPHNE CNEORUM L.
Rose daphne.

A low trailing evergreen shrub, native to Europe, with crowded oblanceolate dark-green leaves and rather dense heads of small fragrant pink flowers.

79205. DAPHNE GNIDIUM L.

For previous introduction and description see No. 78678.

79206. DAPHNE HAEMATHOCARPA Hort.

An ornamental shrub with blood-red fruits.

79207. DAPHNE LAUREOLA L.

For previous introduction and description see No. 79057.

79208 and 79209. DAPHNE MEZEREUM L.
February daphne.

79208. An erect deciduous shrub, about 4 feet high, with alternate oblong leaves, fragrant, lilac-purple flowers, usually in threes, appearing long before the leaves, and ovoid-roundish scarlet fruits. It is native to southeastern Europe and the Caucasus region.

79209. Variety *album*. A white-flowered form.

79210. DAPHNE LAUREOLA PHILIPPI (Gren. and Godr.) Meisn.

A dwarf variety, native to the Pyrenees, with the stems more fully covered with smaller leaves and with smaller, fragrant flowers, often violet, outside.

79211. DAPHNE PONTICA L.

An evergreen shrub, native to southeastern Europe and western Asia, about 5 feet high, with obovate-cuneate shining-green leaves 2 to 3 inches long and fragrant greenish-yellow flowers in small clusters.

79212. DAPHNE PETRAEA Leyb. (*D. rupestris* Facch.).

A dwarf evergreen shrub with small linear-lanceolate obtuse leaves and fragrant light-pink flowers in small terminal heads. It is native to central Europe.

79213. DAPHNE STRIATA Tratt.

For previous introduction and description see No. 79058.

79214 to 79219. EPHEDRA spp. Gnetaceae.
Jointfir.

79214. EPHEDRA ALTISSIMA Desf.
Climbing jointfir.

A handsome woody climber, native to North Africa, 10 to 20 feet high, with minute green leaves, and especially striking when covered with its ovoid scarlet berries.

For previous introduction see No. 74181.

79185 to 79341—Continued.

79215. EPHEDRA AMERICANA ANDINA (Poepp.) Stapf.

A low alpine shrub with short subulate leaves and fruiting aments about an inch long. It is native to the Andes of Chile.

79216. EPHEDRA FRAGILIS Desf.

A low bushy evergreen plant, native to the Mediterranean countries, with minute leaves borne on slender pale-green branches.

For previous introduction see No. 69035.

79217. EPHEDRA FOLIATA Boiss. and Kotschy.

A low shrub, native to Persia, with gray-green cylindrical branches and inconspicuous subulate leaves less than an inch long.

79218. EPHEDRA HELVETICA Meyer.

An alpine evergreen bush, native to Switzerland, with pale-green branches and minute leaves. This is said to yield the alkaloid known as ephedrine, a powerful heart stimulant and astringent.

For previous introduction see No. 69036.

79219. EPHEDRA MAJOR PROCERA (Fisch. and Mey.) Aschers. and Graebn.

A shrub, native to the Caucasus, 4 to 5 feet high, with smooth stiff gray-green branches, minute leaves, and nearly sessile yellowish aments.

79220 to 79286. GENTIANA spp. Gentianaceae.
Gentian.

79220. GENTIANA GENTIANELLA A. T. Johnson.
Stemless gentian.

For previous introduction and description see No. 78857.

79221. GENTIANA ALPINA Vill.

For previous introduction and description see No. 79064.

79222. GENTIANA ANGULOSA Bieb.

For previous introduction and description see No. 79065.

79223. GENTIANA ANGUSTIFOLIA Michx.

For previous introduction and description see No. 79159.

79224. GENTIANA ASCLEPIADEA L.
Milkweed gentian.

For previous introduction and description see No. 79160.

79225. GENTIANA BARBATA Froel.

An erect branched annual, native to Siberia, where it grows in damp situations. It is 3 to 18 inches high, with linear or lanceolate leaves and blue flowers.

79226 and 79227. GENTIANA BAVARICA L.

79226. For previous introduction and description see No. 79067.

79227. Variety *subacaulis*.

79228. GENTIANA BIGELOVII A. Gray.

A purple-flowered gentian, native to the southwestern United States, which

79185 to 79341—Continued.

forms large clumps with 40 to 50 stems over a foot high, bearing 10 to 20 flowers.

79229. GENTIANA BRACHYPHYLLA Vill.

For previous introduction and description see No. 79068.

79230. GENTIANA BURSERI Lapeyr.

A low alpine perennial, native to the Pyrenees, with an unbranched stem, less than a foot high, oval-elliptic leaves, and yellowish flowers with the corollas mostly six cut.

79231. GENTIANA CALYCOSA Griseb.

For previous introduction and description see No. 79069.

79232. GENTIANA CLUSII Perr. and Song.

For previous introduction and description see No. 79070.

79233. GENTIANA CRUCIATA L.
Cross gentian.

For previous introduction and description see No. 79162.

79234. GENTIANA DAHURICA Fisch.

For previous introduction and description see No. 79072.

79235. GENTIANA DECUMBENS L. f.

A stout erect perennial, up to 10 inches high, with oblong or elliptic leaves, mostly radical, and blue flowers. Native to the Himalayas.

79236. GENTIANA DEPRESSA D. Don.

A low, nearly stemless alpine perennial, native to the Himalayas, with broadly elliptic leaves about three-fourths of an inch long and small solitary blue flowers.

79237. GENTIANA DETONSA Rottb.

For previous introduction and description see No. 79073.

79238. GENTIANA DINARICA Beck.

An alpine gentian, native to the Austrian Alps, with broad thick erect leaves and dark-blue flowers.

79239. GENTIANA ELEGANS A. Nels.

An annual alpine gentian, about 8 to 12 inches high, with numerous simple stems, each terminated by a single deep-blue flower 2 inches long. Each stem bears three to six pairs of obovate or oblong leaves. Native to the western United States.

79240. GENTIANA EXCISA Presl.

A stemless alpine gentian, native to the Austrian Alps, about 3 inches high, with elliptic-oblong leaves and rather large blue flowers.

79241. GENTIANA FARRERI Balf. f.

For previous introduction and description see No. 79074.

79242. GENTIANA FAVRATI Rittner.

An alpine gentian, closely allied to *G. verna,* but distinguished by its very short stem, small roundish leaves in a rosette, and by the roundish shape of its petals. Native to the French Alps.

79243. GENTIANA FETISOWII Regel and Winkler.

Variety *alba.* A white-flowered form.

79185 to 79341—Continued.

For previous introduction and description see No. 79024.

79244. GENTIANA FREYNIANA Borum.

For previous introduction and description see No. 79075.

79245 and 79246, GENTIANA FRIGIDA Haenke.

79245. For previous introduction and description see No. 79026.

79246. Variety *alba.*

79247. GENTIANA FROELICHII Jan.

A short-stemmed, nearly tufted alpine gentian with solitary blue flowers. Native to the German Alps, where it is rare.

79248. GENTIANA GENTIANELLA A. T. Johnson. **Stemless gentian.**

For previous introduction and description see No. 78857.

79249. GENTIANA GROMBEZEWSKII Hort.

For previous introduction and description see No. 79027.

79250. GENTIANA HOLOPETALA (A. Gray) Holm.

A slender erect alpine plant, 2 to 16 inches high, with very narrow leaves and sky-blue flowers 1 inch or more long. Native to the Sierra Nevada Mountains of California.

79251. GENTIANA HOOKERI Griseb.

An alpine gentian, about 4 inches high, with oblong-spatulate leaves one-half inch long and flowers three-fourths of an inch long It is native to South America.

79252. GENTIANA IMBRICATA Froel.

A low alpine perennial, native to limestone regions in the Swiss Alps, about 3 inches high, with acute leaves and blue flowers with crenate petals.

79253. GENTIANA KESSELRINGI Regel.

For previous introduction and description see No. 79076.

79254. GENTIANA KOCHIANA Perr. and Song.

For previous introduction and description see No. 79077.

79255. GENTIANA LAGODECHIANA Hort.

For previous introduction and description see No. 79079.

79256. GENTIANA MOORCROFTIANA Wall.

A stiff upright annual, native to the Himalayas, 8 to 16 inches high, with pale-blue flowers about 1½ inches across in nearly terminal clustered cymes.

79257. GENTIANA NEWBERRYI A. Gray.

A dwarf alpine gentian, native to the Sierra Nevada Mountains of California, with obovate or spatulate leaves and pale-blue flowers, white within, about an inch long.

79258. GENTIANA OLIVIERI Griseb.

A herbaceous perennial, native to mountain pastures in the Himalayas, about 9 inches high, with dark-blue flowers in umbellike cymes.

79185 to 79341—Continued.

79259. GENTIANA PANNONICA Scop.

A tall, stout perennial, native to Europe, with broadly elliptical to narrowly ovate leaves and flowers which are purple above.

79260. GENTIANA PARRYI Engelm.

For previous introduction and description see No. 79082.

79261. GENTIANA PHLOGIFOLIA Schott and Kotschy.

For previous introduction and description see No. 79083.

79262. GENTIANA PNEUMONANTHE L.

For previous introduction and description see No. 79163.

79263. GENTIANA PRZEWALSKII Maxim.

For previous introduction and description see No. 79086.

79264. GENTIANA PTEROCALYX Franch.

An annual alpine gentian, native to Yunnan, China, 1 foot or more high, with ovate-cordate leaves and intense blue flowers more than 2 inches long.

79265. GENTIANA PUMILA Jacq.

A very small alpine gentian, almost mosslike, with small clustered leaves and solitary, terminal deep-blue flowers. It is native to the Tyrolese Alps.

79266. GENTIANA PUNCTATA L.

For previous introduction and description see No. 79087.

79267. GENTIANA PURDOMI Hort.

For previous introduction and description see No. 79088.

79268 and 79269. GENTIANA PURPUREA L.

79268. For previous introduction and description see No. 79089.

79269. Variety *nana*.

79270. GENTIANA PYRENAICA L.

A tufted aline perennial, native to Europe and Asia Minor, often forming mats, with leaves having a cartilaginous margin and solitary dark-blue flowers about 1 inch long.

79271. GENTIANA ROSTANI Reut.

A low herbaceous alpine perennial, native to central Europe, about 3 inches high, with bowl-shaped, blue flowers.

79272. GENTIANA SCEPTRUM Griseb.

An erect leafy perennial, native to northwestern North America, 2 to 4 feet high, with oblong-lanceolate leaves and bell-shaped, dark-blue flowers 1 inch long.

79273. GENTIANA SCHISTOCALYX Koch.

An upright perennial, native to Asia Minor, 2 feet or more high, with oval-lanceolate, long-pointed leaves 3 inches in length and flowers 1½ inches long.

79274 to 79278. GENTIANA SEPTEMFIDA Pall.

79274. For previous introduction and description see No. 79091.

79185 to 79341—Continued.

79275. Variety *angustifolia*.

79276. Variety *cordifolia*. A variety native to Armenia, with heart-shaped leaves.

79277. Variety *latifolia*.

79278. Variety *splendida*.

79279. GENTIANA STRAMINEA Maxim.

For previous introduction and description see No. 79093.

79280. GENTIANA SIKKIMENSIS C. B. Clarke.

A perennial alpine, native to the mountains of Sikkim, with decumbent stems, elliptic or rounded leaves, and terminal heads of blue flowers.

79281. GENTIANA TIBETICA King.
Himalayan gentian.

For previous introduction and description see No. 79028.

79282 to 79285. GENTIANA VERNA L.

79282. For previous introduction and description see No. 78862.

79283. Variety *alba*.

79284. Variety *azurea*.

79285. Variety *grandiflora*.

79286. GENTIANA WALUJEWI Regel and Schmalh.

For previous introduction and description see No. 79095.

79287 to 79291. PEDICULARIS spp. Scrophulariaceae. **Woodbetony.**

79287. PEDICULARIS FOLIOSA L.

An alpine perennial, native to central Europe, with simple stems 1 to 3 feet high, with pinnatifid leaves, and a dense spike of cream-colored flowers.

79288. PEDICULARIS PALUSTRIS L.
European woodbetony.

A marsh-loving herbaceous perennial, native to Europe, about 2 feet high, with thick roots, pinnately parted leaves, and rather large purplish flowers in spikelike racemes.

79289. PEDICULARIS RACEMOSA Dougl.

A herbaceous alpine perrenial, native to western North America, a foot or more high, with narrow undivided leaves and spikes of long-beaked white flowers.

79290. PEDICULARIS TUBEROSA L.

A perennial alpine, native to Switzerland, about a foot high, with a tuberous root and yellow flowers.

79291. PEDICULARIS VERTICILLATA L.

A moisture-loving alpine perennial, native to Europe, up to a foot high, with purplish flowers arranged in whorls.

79292 to 79341. SEDUM spp. Crassulaceae. **Stonecrop.**

79292. SEDUM AIZOON L.
Aizoon stonecrop.

Variety *mandschuricum*. A glabrous perennial, 1 to 2 feet high, with erect unbranched stems, alternate oblong-lanceolate leaves, coarsely toothed, and numerous yellow flowers in loose cymes.

79185 to 79341—Continued.

79293. SEDUM AMPLEXICAULE DC.

An evergreen alpine succulent perennial, native to the Mediterranean region, with ascending branches up to 4 inches long and numerous golden-yellow flowers in 2-forked cymes.

79294. SEDUM ANACAMPSEROS L.
Shy stonecrop.

An evergreen glaucous perennial succulent, native to central Europe, with cordate auricled red-margined leaves and numerous small pale-violet flowers in dense globose cymes borne on erect reddish stems 6 to 8 inches high.

79295. SEDUM ANGLICUM Huds.

A low evergreen fleshy perennial, native to western Europe, about 3 inches high, with trailing barren shoots forming dense masses. The small white or rosy flowers are in small cymes.

79296. SEDUM ANOMALUM Britton.

A decumbent or ascending low succulent with spatulate obtuse leaves about four-fifths inch long, and bright yellow flowers in cymes 1 inch across. It is native to California.

79297. SEDUM ANOPETALUM DC.

For previous introduction and description see No. 78950.

79298. SEDUM ATHOUM DC.

An erect perennial succulent, native to the mountains of Greece, about 4 inches high, with pale rose-colored flowers.

79299. SEDUM ATROPURPUREUM Turcz.

A hardy succulent perennial, native to eastern Siberia, with obovate spatulate leaves. The short racemes of small flowers are dark purple throughout, excepting the anthers which are yellow.

79300. SEDUM BOLONIENSE Loisel.

A glabrous succulent perennial, native to Europe, 2 to 3 inches high, with linear-cylindrical leaves crowded into six or seven rows, and yellow flowers, one-half inch across, in a branched umbellate cyme.

79301. SEDUM TELEPHIUM BORDERI Masters. **Liveforever.**

For previous introduction and description see No. 78963.

79302. SEDUM BREVIFOLIUM DC.
Shortleaf stonecrop.

A fleshy perennial, native to France, about 4 inches high, of cespitose habit, with crowded ovoid, pinkish, densely mealy pubescent leaves, and whitish flowers in a 2-forked or 3-forked cyme.

79303. SEDUM CARPATICUM Reuss.

A white-flowered succulent perennial, native to the Carpathian Mountains, about 10 inches high.

79304. SEDUM CORSICUM Duby.

A low fleshy perennial, native to Corsica, about 3 inches high, with crowded, very small gray-green leaves densely pubescent, and small white flowers in lax cymes.

79185 to 79341—Continued.

79305. SEDUM DASYPHYLLUM L.
Leafy stonecrop.

For previous introduction and description see No. 79181.

79306. SEDUM DOUGLASI Hook.

An annual succulent, native to northwestern North America, with an erect stem about 8 inches high, linear subulate leaves, and small yellow flowers in a branched cyme.

79307. SEDUM EUPHORBIOIDES Schlecht.

A hardy succulent perennial, native to northern Siberia, nearly 1 foot high, with crowded linear-oblong leaves and small flowers in short terminal racemes.

79308. SEDUM FABARIA Koch.

An alpine succulent, native to Europe, with upright stems 8 to 16 inches high, flat grass-green leaves, and lilac-purple flowers in a dense terminal corymb.

79309. SEDUM GATTEFOSSEI Batt.

A low delicate annual succulent, native to Morocco, about 2 inches high, with graceful stems, alternate spatulate or oblong leaves, and small yellow flowers in terminal cymes.

79310. SEDUM GLAUCUM Lam.

A succulent perennial, native to Europe and North Africa, 2 to 4 inches high, with tufted slender stems, crowded, oblong, or roundish leaves, and small white or pinkish flowers in few-flowered cymes.

79311. SEDUM GRACILE Haensel.

A low stemless alpine succulent, native to Spain, with a tuft of terete obtuse leaves and cymes of small white flowers.

79312. SEDUM HIRSUTUM All.

A low hairy alpine succulent, native to central Europe, with reddish stems, alternate sessile leaves, and small white flowers which have purple lines.

79313. SEDUM JACCARDI Hort.

An ornamental succulent.

79314. SEDUM LAGGERI Hort.

An ornamental succulent.

79315. SEDUM LEBLANCEI Hamet.

An ornamental annual succulent, native to southwestern China, with erect graceful stems about 5 inches high, obovate-linear leaves, and dense corymbs of small flowers.

79316. SEDUM MAGELLENSE Tenore.

An alpine perennial, native to Asia Minor, of cespitose habit, with crowded flat obovate fleshy leaves and pinkish-white flowers in paniclelike racemes.

79317. SEDUM MAXIMUM Suter.
Great stonecrop.

For previous introduction and description see No. 78957.

79318. SEDUM MIDDENDORFFIANUM Maxim. **Middendorff stonecrop.**

For previous introduction and description see No. 79046.

79185 to 79341—Continued.

79319. SEDUM MURALE Hort.

A succulent said to have dark leaves and white flowers with a pink center.

79320. SEDUM NEVII A. Gray.

A cespitose succulent perennial, native to the southeastern United States, with erect flower stems 2 to 5 inches high, obovate-spatulate leaves in rosettes, and numerous white flowers, nearly one-half inch across, in forked cymes.

79321. SEDUM NICAEENSE All.

A glabrous succulent perennial, native to the Mediterranean region, with a thick woody rootstock, ascending stems 6 to 8 inches long, oval-lanceolate leaves, and greenish-yellow flowers, one-half inch across, in terminal cymes.

79322. SEDUM NUTTALLIANUM Rafin.

An annual simple or branched succulent, native to the southern United States, 2 to 4 inches high, with scattered flat or somewhat terete oblong leaves, and cymes of small yellow flowers.

79323. SEDUM OBTUSIFOLIUM Meyer.

A perennial alpine, native to the Caucasus, with erect stems, rounded-oval leaves, and small white flowers in elongated leafy cymes.

79324. SEDUM OCHROLEUCUM Vill.

A succulent alpine, native to France, with oblong-acute crowded leaves and small white flowers.

79325. SEDUM PALMERI S. Wats.

An erect perennial, about 6 inches high, with succulent flattened leaves 1 inch or more long and deep-orange flowers in a branched panicle. It is native to Mexico.

79326. SEDUM PILOSUM Bieb.

For previous introduction and description see No. 78958.

79327. SEDUM PSEUDOSPECTABILE Praeger.

A fleshy perennial, native to northeastern China, about 20 inches high, with ovate or obovate sessile leaves about 1½ inches long, and rose-colored flowers, not quite one-half inch long, in compact terminal clusters.

79328. SEDUM PURPURASCENS Koch.

An erect succulent perennial, native to central Europe, 12 to 18 inches high, with scattered oblong-ovate leaves 2 to 3 inches long and numerous pink or white flowers in dense cymes.

79329. SEDUM ROSEUM (L.) Scop. (*S. rhodiola* DC.) **Roseroot stonecrop.**

A perennial succulent, native to Europe, with a thick fleshy rootstock that exhales the odor of rose water. The stems are 4 to 8 inches high, with scattered glaucous spatulate leaves an inch long, and flat-topped cymes of greenish or reddish-purple flowers.

79330. SEDUM RUBENS L.

A low succulent, native to the Mediterranean countries, about 3 inches high, with small pinkish or white flowers.

79185 to 79341—Continued.

79331. SEDUM SELSKIANUM Regel and Maack.

A spreading hairy fleshy perennial, native to northeastern Asia, 1 foot or more high, with lanceolate-sessile leaves and numerous yellow flowers in a much-branched terminal leafy hollow-topped cyme.

79332. SEDUM SEMPERVIVUM Ledeb.

A pubescent biennial succulent, native to Asia Minor, 2 to 8 inches high, with 40 to 50 obovate leaves in a basal rosette and scarlet flowers in a dense-panicled cyme.

79333. SEDUM SPATHULIFOLIUM Hook.

A succulent glaucous perennial, native to northwestern North America, finally reddish, with the leaves of the barren shoot forming terminal rosettes 1½ inches in diameter. The numerous yellow flowers, one-half inch across, are borne in terminal forking cymes.

79334. SEDUM STAHLII Solms. **Stahl stonecrop.**

A trailing much-branched succulent perennial, native to Mexico, with green or pinkish stems 4 to 6 inches high, opposite nearly terete leaves, and yellow flowers in terminal cymes.

79335. SEDUM STELLATUM L.

A low succulent annual, native to Europe, about 3 inches high, with a rosette of flat roundish leaves and lax cymes of reddish or purplish flowers.

79336. SEDUM STENOPETALUM Pursh.

A tufted fleshy perennial, native to western North America, 3 to 6 inches high. The crowded sessile leaves are linear or lanceolate, and the bright-yellow flowers are in much-branched scorpoid cymes.

79337. SEDUM STRIBRNYI Velen.

A succulent perennial, native to Bulgaria, laxly cespitose, with ascending stems 4 to 6 inches long, oblong-terete leaves, and small yellow flowers in compound cymes.

79338. SEDUM EWERSII Ledeb. **Violet stonecrop.**

Variety *Turkestanicum*. A form said to be 4 inches high, with deep-violet flowers, and and to be hardy in Massachusetts.

79339. SEDUM VILLOSUM L.

A low fleshy annual, native to the mountains of central Europe, 3 to 4 inches high, with simple erect stems hairy above and alternate linear leaves. The dull rose or white flowers are in a small loose terminal cyme.

79340. SEDUM WOODWARDI N. E. Brown.

A perennial succulent, perhaps native to China, with simple green stems 1 foot high, alternate lax obliquely obovate flat leaves, and yellow flowers, about one-half inch across, in loose cymes.

79341. SEDUM YUNNANENSE Franch.

A succulent plant, native to southwestern China, 1 to 2 feet high, with a thick rhizome, a whitish stem, opposite sessile rounded-oval leaves, and small yellow flowers in cymes.

79342 to 79349. AVENA spp. Poaceae. **Oats.**

From Sydney, New South Wales, Australia. Seeds presented by H. Wenholz, director of plant breeding in the New South Wales Department of Agriculture. Received March 12, 1929.

New hybrids which are not entirely resistant to crown rust, but have a large measure of resistance under conditions which favor this disease in Australia.

79342. AVENA sp.

Bombo. A cross between Abruzzi and Victory, maturing late in the season.

79343. AVENA sp.

Boppy. A midseason variety which is a cross between two strains of White Ligowo and Algerian.

79344. AVENA sp.

Buddah. A selection from Sunrise, maturing very early in the season.

79345. AVENA sp.

Gidgee. A very early variety of similar breeding to Boppy [No. 79343].

79346. AVENA sp.

Kendall. A selection from Ruakura, maturing early in the season.

79347. AVENA sp.

Kurri. A selection from Ruakura, maturing early in the season.

79348. AVENA sp.

Laggan. A selection from Kelsall's, maturing very early.

79349. AVENA sp.

Lampton.

79350 to 79359. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Nishigahara, Japan. Seeds presented by Dr. H. Ando, Director, Imperial Agricultural Experiment Station. Received March 12, 1929.

79350. *Kintyaku.*

79351. *Okute-yamanasu.*

79352. *Otosi.*

79353. *Saitama-sinnasu.*

79354. *Siro-nasu.*

79355. *Tama-sinnasu.*

79356. *Tiba-wase.*

79357. *Turuboso-sennari.*

79358. *Wase-marunasu.*

79359. *Wase-sennari.*

79360 to 79365. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Portici, Italy. Scions presented by Prof. Gaetano Briganti, R. Instituto Superiore Agrario. Received March 19, 1929.

79360. *Abbate.*

79361. *Cerasiello.*

79362. *Cipolla* or *Zepolle.*

79363. *Del Prete.*

79364. *Meraviglia lunga.*

79365. *Meraviglia tonda.*

79366 to 79377.

From Nagpur, Central Provinces, India. Seeds presented by D. N. Mahta, second economic botanist. Received February 25, 1929.

79366 to 79373. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

79366. A late variety.

79367. An early variety.

79368. A late variety.

79369. *Calcutta.*

79370. Received without notes.

79371. A variety with purple flesh.

79372. A variety with red flesh.

79373. A variety with white flesh.

79374 to 79377. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

79374. Mixed melon seeds.

79375. *Jalgaon.*

79376. *Piria.*

79377. *Kharkhara.*

79378 to 79419. ORYZA SATIVA L. Poaceae. **Rice.**

From China. Seeds collected by F. A. McClure, Lingnan University, Canton. Received March 11, 1929.

Nos. 79378 to 79381 were collected in November, 1928, and are white, starchy, beardless varieties of the second crop.

79378. No. 1055. *Yau chim.* From Ngfungts'uen, Honam Island.

79379. No. 1056. *Chuk chim.* From the Agricultural College of the Lingnan University, Canton.

79380. No. 1057. *Paak hok yau chim.* From the Agricultural College of the Lingnan University, Canton.

79381. No. 1058. *Kam fung (chim).* From Sunfungwong village, Honam Island.

Nos. 79382 to 79402 were collected during November, 1928.

79382. No. 1059. *Oo tuk noh.* From Hato, Honam Island. A white, glutinous, beardless variety of the second crop. It takes its name "black tip glutinous" from the dark markings on the glumes.

79383. No. 1060. *Tin tau taai noh.* Near Lingnan University, Canton, China.

79384 and **79385.** From Ngfungts'uen, Honam Island. Two strains of white starchy rice obtained in the same field.

79384. No. 1061. *Paak hok yau chim.* A beardless variety.

79385. No. 1062. *Paak hok yau chim.* A bearded variety.

79386. No. 1063. *Taai kwat yau chim.* Near Lingnan University. A white, starchy, beardless variety of the second crop.

79387. No. 1064. *Paak hok tsai.* From Hato, Honam Island. A white, starchy, beardless variety of the second crop.

78378 to 79419—Continued.

79388. No. 1065. *Tsai (chai) mei tavi noh* (compact headed large glutinous). From Hato, Honam Island. A white, glutinous, beardless variety of the second crop.

Nos. 79389 to 79391 are white, starchy, beardless varieties of the second crop.

79389. No. 1066. *Fa hok kam fung.* From Shat'au, Honam Island.

79390. No. 1067. *Noh chaap chim.* From Ngfungts'uen, Honam Island.

79391. No. 1068. *Paak hok ham fung.* From Shat'au, Honam Island.

79392. No. 1069. *Paak hok noh.* From Honglok, Honam Island. A white, glutinous, beardless variety of the second crop.

79393. No. 1070. *Noh chaap.* From Shuipo, Honam Island. A white, starchy beardless variety of the second crop.

79394. No. 1071. *Kam fung tsai.* From Shat'au, Honam Island. A white starchy, semibearded variety of the second crop.

79395. No. 1072. *She chim.* From Ngfung, Honam Island. A white starchy, beardless variety of the second crop.

79396. No. 1073. *Uen chu noh.* From Paanchikaau, Honam Island. A white, glutinous, beardless variety of the second crop.

79397. No. 1074. *Yau chim noh.* From Paanchikaau, Honam Island. A white, glutinous, semibearded variety of the second crop.

79398. No. 1075. *T'aan t'au noh.* From Lekkau, Honam Island. A white, glutinous, beardless variety of the second crop.

79399. No. 1076. *Ma mei noh.* From Lekkau, Honam Island. A white, glutinous, beardless variety of the second crop.

79400. No. 1077. *Heung mai* (fragrant rice). From Shuipo, Honam Island. A white, starchy, beardless variety of the second crop.

79401. No. 1078. *Paak hok noh chaap.* From Lekkau, Honam Island. A white, semibearded starchy variety of the second crop.

79402. No. 1080. *Yuk shau k'au* (Hydrangea). From Lekkau, Honam Island. A white, beardless, starchy variety of the second crop.

79403. No. 1081. *Suet chim.* From Yunghui, Kwangsi Province, December 9, 1929. A red-grained, bearded, starchy variety of the second crop.

Nos. 79404 to 79408 were collected during October, 1928.

79404. No. 1082. *Paak hok yau chim.* From Poknaneung, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy rice of the second crop.

79405. No. 1083. *Chek mai sz miu.* From Cheungkongmei, Tsangsheng district, Kwangtung Province. A red-grained, beardless, starchy variety of the second crop.

79406. No. 1084. *Wong hok yau chim.* From Sheungto, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79407. No. 1085. *Wong chim.* From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, starchy, beardless variety of the second crop.

79408. No. 1086. *Yau chim noh.* From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

Nos. 79409 to 79419 were collected during November, 1928.

79409. No. 1087. *Paak noh tsai.* From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, glutinous beardless variety of the second crop.

79410. No. 1088. *Chaan shui chim.* From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79411. No. 1089. *Wong hok sz miu.* From Chohk'ai, Tsangsheng district, Kwantung Province. A white-grained, beardless, starchy variety of the second crop.

79412. No. 1090. *Paak hok chek.* From Pokha, Tsangsheng district, Kwangtung Province. A red-grained, semibearded, starchy variety of the second crop.

79413. No. 1091. *Wong hok noh.* From Pokha, Tsangsheng district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

79414. No. 1092. *Lung moon chek.* From Pokha, Tsangsheng district, Kwangtung Province. A red (pink)-grained, beardless, starchy variety of the second crop.

79415. No. 1093. *Lo chim.* From Pokha, Tsangsheng district, Kwangtung Province. A red-grained, beardless, starchy variety of the second crop.

79416. No. 1094. *Kai chue noh.* From Cheungkongmei, Tsangsheng district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

79417. No. 1095. *So tsai chek.* From l'okha, Tsangsheng district, Kwangtung Province. A red-grained, bearded, starchy variety of the second crop.

79418. No. 1096. *Shui nga chim.* From Chohk'ai, Tsangsheng district, Kwangtung Province. A white-grained, beardless, starchy variety of the second crop.

79419. No. 1097. *Taai noh tsai.* From T'ongt'auha, Tungkoon district, Kwangtung Province. A white-grained, beardless, glutinous variety of the second crop.

79420 to 79453.

From Japan. Scions obtained by R. K. Beattie, Bureau of Plant Industry. Received March 13, 1929.

79420 to 79449. CASTANEA CRENATA Sieb. and Zucc. Fagaceae.

Japanese chestnut.

79420 to 79453—Continued.

Scions collected in January, 1929, of cultivated varieties unless otherwise stated.

79420. No. 814. *Ganne.* Nuts from Sakaue Mura, Kuka Gun, Yamaguchi Ken, presented by Shigeo Hayashi.

79421 to 79429. From Tateno Farm, Nogi Mura, Shimotsuga Gun, Tochigi Ken.

79421. No. 815. *Butsake.*

79422. No. 816. *Hassaku.*

79423. No. 817. *Ichiemon.*

79424. No. 818. *Inukoroshi.*

79425. No. 819. *Mino.*

79426. No. 820. *Motokichi* No. 1.

79427. No. 821. *Odai.*

79428. No. 822. *Osaya.*

79429. No. 823. *Wase tamba.*

79430 to 79439. From the Okitsu Agricultural Experiment Station.

79430. No. 824. *Bon I.*

79431. No. 825. *Buzen.*

79432. No. 826. *Dai hachi.*

79433. No. 827. *Dengoro.*

79434. No. 828. *Kambei.*

79435. No. 829. *Obi wase.*

79436. No. 830. *Ogawa ichigo.*

79437. No. 831. *Ogawa teteuchi.*

79438. No. 832. *Tsunehisa.*

79439. No. 833. *Yakko.*

79440 to 79447. From the Ayabe Machi Agricultural Experiment Station at Kyoto.

79440. No. 839. *Sakahara.*

79441. No. 840. *Goku wase.*

79442. No. 841. *Kamadani okute.*

79443. No. 842. *Suginobo.*

79444. No. 843. *Nishi gaki.*

79445. No. 844. *Obata.*

79446. No. 845. *Futakura.*

79447. No. 846. *Otomune.*

79448 and 79449. From Sakaue Mura, Kuka Gun, Yamaguchi Ken; presented by Shigeo Hayashi.

79448. No. 847. *Ganne.*

79449. No. 848. *Yokobai.*

79450 to 79453. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki.**

From the Okitsu Agricultural Experiment Station.

79450. No. 835. *Sushi.* Originally from Keisho Hokudo, Chosen.

79451. No. 836. *Panshi.* Originally from Keizan.

79452. No. 837. *Shakokushi.* Originally from Shakoku.

79453. No. 838. *Kojomshi.* Originally from Hoki.

79454 to 79461.

From Viçosa, Minas Geraes, Brazil. Presented by Prof. P. H. Rolfs, Escola Superior de Agricultura e Veterinaria de Minas Geraes. Received March 16, 1928.

79454 to 79459. CITRUS spp. Rutaceae.

79454. CITRUS sp.

Cacau. Scions of an apparent sport from the Selecta. Tree upright stocky grower, very vigorous and prolific. Fruits orange when ripe, ripening about the same time as Pineapple; skin rather thick and corrugated; seeds 15 to 30; eating quality excellent. Some of the buds show reversion to Selecta type.

79455. CITRUS sp.

Civó, or willow twigged. Scions of a highly ornamental as well as useful variety of orange which has the peculiar habit of the limbs growing pendent, like a weeping willow. It must be budded high on the stock for the best effect because, if budded near the ground, it forms a low creeping bush. The fruits are disposed laterally on the branches, making, when ripe, a wreath of oranges of a deep orange-red. They are of superior flavor and ripen about midseason, which is about the time Pineapple ripens, and they remain in prime condition for a much longer time than the commercial orange. The skin is thin and smoother, and the seeds very few, running from 2 or 3 to 20.

79456. CITRUS sp.

Lancetta. Said by Doctor Caire to have originated from a bud sport found among Pera. (Oblong form Valencia type.) Fruits small, very sweet and delicious, ripening very late in the year.

79457. CITRUS sp.

Lima Paulista. Type of tree and habit of growth similar to Tanger. Fruits flattened, very sweet when ripe, thin skinned, and contain few seeds.

79458. CITRUS sp.

Limão Inherme. Habit of growth of tree similar to Lima Paulista and Tanger. Fruits more oblong than Lima Paulista, about the size and shape of some of the larger Mexican limes, and ripen continuously throughout the year. The flavor is quite distinct from that of the Mexican lime.

79459. CITRUS sp.

Tanger. A very peculiar and desirable type of orange, said to have been named after the city of Tangier. It apparently does not belong to the *Citrus sinensis* species. The leaves are small and the petioles very small, giving the tree a very peculiar appearance. The fruits, produced in clusters, are about the size and color of tangerines and are sweet and delicious, containing 20 or more seeds.

79460 and 79461. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

79460. Seeds.

79461. *Sabiana.* Seeds.

79462 to 79502.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received March 19, 1929.

79462 to 79469. AGAVE spp. Amaryllidaceae. **Agave.**

79462. AGAVE ALBICANS Jacobi.

A trunkless, cespitose agave, native to Mexico, with spreading, glaucous, thin oblanceolate leaves about a foot long, with close-set minute brown marginal prickles and a terminal needlelike small spine. The reddish green flowers, in pairs, are a little over 1 inch long and are on a spike 3 feet high.

79463. AGAVE ELLEMEETIANA Koch.

A nearly trunkless plant with spreading lanceolate unarmed leaves about 2 feet long, and paired greenish white flowers, about 1 inch long, in a spikelike inflorescence 5 to 10 feet high. Native to Mexico.

79464. AGAVE FRANZOSINI Baker.

An agave with roughish, white, recurved ascending lanceolate leaves up to 8 feet long, armed with dark-gray marginal prickles and a large terminal spine. The tall green flower stem, 30 to 40 feet high, bears flowers over 3 inches long. It is probably native to Mexico.

79465. AGAVE LOPHANTHA Schiede. **Crested agave.**

An agave, native to eastern Mexico, with spreading, glossy green lanceolate leaves a foot or more long, with small hooked marginal prickles and terminating in a brown grooved spine. The flowers, 1½ inches long, are borne on a spike 9 to 15 feet high.

79466. AGAVE POLYACANTHA Haw.

A cespitose plant, native to southern Mexico, with lanceolate, upcurving leaves sometimes 3 feet long, terminating in a stout spine and margined with close-set brown prickles. The flowers, 2 inches long, are in a spikelike inflorescence 4 to 5 feet high.

79467. AGAVE SALMIANA Otto.

An agave with gray-green very thick leaves about 3 feet long, with an elongated gray terminal spine and triangular marginal teeth. The scape is covered with long, somewhat spreading bracts. Native to Mexico.

79468. AGAVE TEQUILANA Web.

A stemless century plant with straight, rather stiff leathery gray-green leaves about 3 feet long and 3 inches wide, terminating in a short stout spine. The flower stem is about 20 feet high, with about 30 floral branches. Native to southern Mexico.

79469. AGAVE VICTORIAE-REGINAE T. Moore.

An agave, native to northeastern Mexico, with 3-angled short, stiff, triangular dark-green leaves about 7 inches long, ending in a short black spine, and a slender compact flowering spike 10 to 12 feet high.

79470 to 79473. ALOE spp. Liliaceae.

79470. ALOE ARBORESCENS Mill.

An arborescent succulent with a simple trunk 10 to 15 feet high, clothed at the top with dull-green sinuately spreading gradually narrowed leaves about 2 feet long, with prickly margins. The red flowers are in an elongated raceme. It is probably a native of the Cape of Good Hope.

79471. ALOE SAPONARIA (Ait.) Haw.

An aloe from the Cape of Good Hope which grows in cespitose clusters, with ascending, oblong-lanceolate acuminate leaves about 7 inches long, often reddish with pale blotches, and with large confluent brown marginal teeth. The red flowers are in a branched inflorescence 1 or 2 feet high.

79472. ALOE STRIATA Haw.

A low fleshy plant with a dense rosette of thick narrowly oblong leaves 1 or 2 feet long, obscurely spotted, and bright-red flowers about 1 inch long, in 20 or more heads borne on a stout, branched peduncle. Native to South Africa.

79473. ALOE STRIATA × ?.

Seeds of a hybrid aloe of which only one parent is known.

79474. DAPHNE GNIDIUM L. Thymelaeaceae.

For previous introduction see No. 79205.

79475. GASTERIA OBTUSIFOLIA (Salm-Dyck) Haw. Liliaceae.

A low fleshy South African plant with a leafy stem 2 inches high, densely crowded tongue-shaped leaves 4 to 6 inches long, and rosy flowers in a raceme over a foot long.

79476. GASTERIA VERRUCOSA Haw. Liliaceae.

A cespitose succulent, native to the Cape of Good Hope, with spreading, somewhat concavely 3-sided, dull-gray acute leaves about 4 inches long, roughened by white tubercles, and rosy flowers about an inch long in an inflorescence 2 feet high.

79477 to 79479. KALANCHOE spp. Crassulaceae.

79477. KALANCHOE CRENATA Haw.

For previous introduction and description see No. 79166.

79478. KALANCHOE GLAUCESCENS Britten.

A plant, native to tropical Africa, with a terete stem 2 feet or more high, narrowly oval irregularly crenate fleshy leaves 5 inches long, and red or dark-yellow flowers one-half inch long in a glaucous panicle.

79479. KALANCHOE SCHIMPERIANA A. Rich.

An Abyssinian succulent of cespitose habit, with obovate-spatulate crenate leaves and pale-yellow flowers, about 3 inches long, in a dense branching cyme.

79480 to 79492. MESEMBRYANTHEMUM spp. Aizoaceae. **Figmarigold.**

79480. MESEMBRYANTHEMUM ACINACIFORME L.

A fleshy plant with a jointed stem 2 to 3 feet high, opposite, scimitar-shaped leaves 2 to 3 inches long, with

79462 to 79502—Continued.

the keel dilated, and purple flowers, about 4 inches across, said to be the largest in the genus. The edible fruits about the size of a gooseberry, are eaten by the natives of South Africa.

79481. MESEMBRYANTHEMUM BLANDUM Haw.

An erect perennial succulent, 2 feet high, with numerous branches, compressed-triangular leaves 2 inches long or less, with minute dots and pale-rose or white flowers 2 inches across. It is native to the Cape of Good Hope.

79482. MESEMBRYANTHEMUM CORDIFOLIUM L. f. **Heartleaf figmarigold.**

A diffuse-stemmed perennial, native to South Africa, 1 to 2 feet high, with opposite cordate leaves somewhat papillose and solitary purple daisylike flowers.

For previous introduction see No. 77228.

79483. MESEMBRYANTHEMUM CULTRATUM Salm-Dyck.

A low stemless succulent, native to South Africa, with thick 2-ranked, tongue-shaped leaves curved like a pruning knife, with a blunt apex, and yellow flowers on a somewhat 3-angled peduncle an inch or more high.

79484. MESEMBRYANTHEMUM DEPRESSUM Haw.

A stemless prostrate succulent, native to South Africa, with narrow, tongue-shaped, recurved-depressed acute leaves and yellow flowers with the petals somewhat recurved.

79485. MESEMBRYANTHEMUM DIFFORME L.

An almost stemless fleshy plant, native to South Africa, with obliquely cross-shaped, narrow, tongue-shaped punctate leaves about 2 inches long and solitary large yellow flowers.

79486. MESEMBRYANTHEMUM EDULE L.

A low, fleshy plant with an angular prostrate stem, opposite triquetrous curved leaves 3 to 4 inches long, with the keel serrate, and large yellow or purple flowers. The small edible fruits are the "figs" of the Hottentots in South Africa, where this plant is native. In California this species is used as a ground cover.

79487. MESEMBRYANTHEMUM HETEROPETALUM Haw.

A low succulent with erect-spreading stem and branches and glaucous, subfalcate leaves. The pale-red or whitish flowers are solitary. It is native to South Africa.

79488. MESEMBRYANTHEMUM LINGUIFORME L.

A low fleshy plant, with deflexed, somewhat falcate, and unequally tongued-shaped leaves, flattish above, and yellow flowers. It is native to South Africa.

79489. MESEMBRYANTHEMUM SALMII Haw.

A nearly stemless succulent from the Cape of Good Hope, with decussate attenuate leaves, one of each pair acute and the other oblique and blunt. The yellow flowers are sessile.

79462 to 79502—Continued.

79490. MESEMBRYANTHEMUM SERRULATUM Haw.

A rather shrubby plant, erect when young, with 3-angled fleshy thick leaves and purplish asterlike flowers. It is native to the Cape of Good Hope.

79491. MESEMBRYANTHEMUM SPECTABILE Haw.

A prostrate succulent, native to South Africa, with ascending branches, thick 3-sided linear leaves 2 to 3 inches long, and daisylike purplish flowers 2 inches across.

For previous introduction see No. 77237.

79492. MESEMBRYANTHEMUM UNCATUM Salm-Dyck.

A low, nearly stemless plant with narrow tongue-shaped fleshy leaves 2½ inches long, hooked at the apex, and yellow flowers. It is native to South Africa.

79493 to 79502. STAPELIA spp. Asclepiadaceae.

Low fleshy cactuslike plants with coarsely 4-angled stems and large showy flat evil-smelling flowers.

79493. STAPELIA ATRATA Todaro.

The erect, 4-angled, fleshy stems of this plant are 2 to 6 inches high and are green and more or less mottled with purple. The one to five dark purple-brown flowers are 2 to 3 inches across, with acuminate-deltoid corolla lobes. It is native to South Africa.

79494. STAPELIA CILIOLULATA Todaro.

A robust plant with fleshy stems, up to 5 inches high, armed with short projecting lateral teeth. The flower, about 3 inches across, is bright yellow, with lighter spots, and the broadly triangular-oval lobes are marked with irregular brown spots. It is of garden origin.

79495. STAPELIA CLYPEATA Jacq.

An erect fleshy plant, with obtusely angled stems 2 to 6 inches high which are green, often mottled or tinted with purple. The flowers, single or as many as five at the bases of the young stems, are 2 or 3 inches across and are pale greenish yellow with dark purple-brown spots. It is native to South Africa.

79496. STAPELIA DISCOLOR Todaro.

A rather large carrion-flower with green, purple-tinged, sharply 4-angled stems 3 to 18 inches high, and one to three dark purple-brown flowers, about one-half inch across, marked with faint yellowish transverse lines. It is native to the Cape of Good Hope.

79497. STAPELIA DIVERGENS N. E. Brown.

A perennial succulent with 4-angled stems about 4 inches high and slightly wrinkled light-yellow flowers, 2 inches across, with thick ramified brown-crimson lines on the disk and lower two-thirds of the petals. It is a hybrid, of unknown parentage, raised in Europe.

79498. STAPELIA MUTABILIS Jacq.

A rather large carrion-flower, with green or purplish stems 3 to 18 inches

79462 to 79502—Continued.

high, acutely 4-angled and armed with stout conical teeth. The flower, about 1½ inches across, has sharply recurved petals, which are pale greenish yellow, with the upper third purple brown. It is native to South Africa.

79499. STAPELIA MUTABILIS Jacq.

Variety *picta*.

79500. STAPELIA PLANIFLORA Jacq.

A freely branching succulent with erect 4-angled stems 2 to 6 inches high, armed with acute spreading teeth. The pale greenish-yellow flower, about 3 inches across, is irregularly purple spotted and is often lined with purple-brown. It is native to the coastal regions of South Africa.

79501. STAPELIA RUGOSA Jacq.

A fleshy plant with erect stems, obtusely 4-angled and armed with conical teeth. The flower, about 2½ inches across, is greenish yellow with numerous scattered small purple spots and irregular transverse dark purple-brown lines. The outer corona lobes are acutely 3-toothed at the apex. It is native to South Africa.

79502. STAPELIA TRIFIDA Todaro.

A cespitose, fleshy plant, probably originally from South Africa, with 4-angled stems about 3 inches high. The purplish-violet flower is 3 inches across, with purple corolla tips and numerous traverse yellow lines.

79503 to 79505.

From Nancy, France. Seeds presented by Prof. Edmond Gain, director of the botanic garden of the Nancy University. Received March 18, 1929.

79503. KITAIBELIA VITIFOLIA Willd. Malvaceae.

For previous introduction and description see No. 79174.

79504. OMPHALODES LINIFOLIA (L.) Moench. Boraginaceae.

A summer-flowering annual plant a foot high, with wedge-shaped radical leaves, linear-lanceolate stem leaves, and lax racemes of white flowers. Native to dry stony hills of Spain and Portugal.

79505. PETTERIA RAMENTACEA (Sieber) Presl (*Cytisus weldeni* Vis.). Fabaceae.

For previous introduction and description see No. 79039.

79506 to 79521.

From Winchester, England. Plants purchased from Hillier & Sons, West Hill Nurseries. Received December 20, 1928. Numbered in March, 1929.

79506 to 79508. BERBERIS spp. Berberidaceae. **Barberry.**

79506. BERBERIS ATROCARPA C. Schneid.

An ornamental shrub, native to western Szechwan, China, 3 to 5 feet high, with leathery evergreen leaves, shining green above and yellowish green beneath, and almost globose jet-black fruits.

For previous introduction see No. 76212.

79506 to 79521—Continued.

79507. BERBERIS EMPETRIFOLIA Pers. **Crow barberry.**

For previous introduction and description see No. 78877.

79508. BERBERIS HOOKERI Lem.

An evergreen barberry, native to the Himalayas, where it is a dense shrub 3 to 5 feet high, with usually 3-parted spines, dark-green, leathery, spiny margined leaves, and cylindrical black-purple berries often persisting on the shrub until spring.

For previous introduction see No. 65232.

79509 to 79521. BUXUS spp. Buxaceae.

79509. BUXUS HARLANDII Hance.

A compact evergreen shrub, native to China, about 3 feet high, with obovate-oblong leaves, gradually narrowed toward the base, less than an inch long and one-fourth of an inch broad.

For previous introduction see No. 76558.

79510 to 79520. BUXUS SEMPERVIRENS L. **Common box.**

79510. Variety *aurea maculata*.

79511. Variety *aurea pendula*.

79512. Variety *handsworthii*.

79513. Variety *latifolia macrophylla*.

79514. Variety *latifolia maculata*.

79515. Variety *myosotifolia*.

79516. Variety *myrtifolia*.

79517. Variety *prostrata*.

79518. Variety *pyramidalis*.

79519. Variety *rosmarinifolia*.

79520. Variety *salicifolia*.

79521. BUXUS WALLICHIANA Baill.

An evergreen shrub, native to the Himalayas, 10 feet high, with linear-lanceolate leaves 2 to 4 inches long.

79522. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

From Granada, Spain. Plants presented by Juan Leyva, through Austin C. Brady, American consul, Malaga. Received March 19, 1929.

Marcona.

79523 and 79524. FICUS CARICA L. Moraceae. **Common fig.**

From Balaguer, Lerida, Spain. Cuttings presented by Ramon Sala Roqueta. Received March 21, 1929.

79523. *Fraga*.

79524. *Layola blanca*.

79525. ELAEODENDRON CAPENSE Eckl. and Zeyh. Celastraceae. **False olive.**

Plants grown from seeds presented by the Plant Quarantine and Control Administration. Received February 15, 1929.

79525—Continued.

An erect shrub, native to South Africa, with leathery ovate leaves 3 inches long and panicles of small white flowers followed by red drupes an inch long.

For previous introduction see No. 51144.

79526. WAHLENBERGIA BIVALVIS Merr. Campanulaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received February 27, 1929.

An erect glabrous branched annual up to 16 inches high, with sessile leaves and blue, bell-shaped flowers a quarter of an inch long. Native to the Philippine Islands.

79527. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

From Tirana, Albania. Seeds presented by A. T. Fultz, Director, Albanian Vocational School of the American Junior Red Cross and Ministry of Education. Received March 15, 1929.

Seeds white with a black eye; from the market at Kavaji.

79528. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

From New Guinea. Seeds presented by L. P. B. Armit, Port Moresby. Received March 25, 1929.

Mixed seeds from Autemba and Biagi, Kokoda district, northern division.

79529. ORCHIDANTHA MAXILLARIOIDES (Ridley) Schum. Musaceae.

From Glasnevin, Ireland. Plants presented by J. W. Besant, Director, Botanic Gardens. Received March 16, 1929.

A gingerlike stemless Malayan plant with oblong leaves about 8 inches long and panicles 1 to 2 feet high of rather showy purple flowers, resembling those of Maxillaria.

79530. ORCHIDANTHA LONGIFLORA (Scort.) Ridley. Musaceae.

From Singapore, Straits Settlements. Plants presented by R. E. Holttum, Director, Singapore Botanic Gardens. Received March 23, 1929.

A large stemless tropical plant, related to the banana and native to the Malay Peninsula, which forms huge tufts of lanceolate leaves 3 feet long. The solitary axillary flowers, about 8 inches in length, have long purple bracts and yellowish petals.

79531. AMARANTHUS VIRIDIS L. Amaranthaceae. **Amaranth.**

From Antigua, British West Indies. Seeds presented by A. E. Collens, Government Chemist and Superintendent of Agriculture. Received March 22, 1929.

A plant cultivated in Antigua and used in the same manner as spinach.

79532. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From near Trujillo, Peru. Seeds presented by Ralph T. Gray, Estación Experimental Agrícola, Lima, Peru. Received March 28, 1929.

A wild Peruvian tomato collected by G. N. Wolcott, Estación Experimental Agrícola, Lima.

79533 to 79545.

From the West Indies. Seeds collected by Allison V. Armour. Received March 25, 1929.

79533. AMERIMNON LANCEOLARIUM (L. f.) Kuntze (*Dalbergia lanceolaria* L. f.). Fabaceae.

Dominican Botanic Gardens. A tree 60 to 80 feet high, native to India, with compound leaves made up of 11 to 15 elliptical rigidly subcoriaceous leaflets 2 inches long and terminal and axillary compound panicles of small purplish flowers followed by bright-brown flexible pods.

79534. BERRIA AMMONILLA Roxb. Tiliaceae.

Dominican Botanic Gardens. A large tree, native to southeastern Asia, with long-stemmed heart-shaped leaves and dense racemes of small white flowers. The hard durable dark-red wood is used for agricultural implements and is also exported under the name of trincomali wood.

For previous introduction see No. 63761.

79535. CAPSICUM ANNUUM L. Solanaceae. **Common redpepper.**

A very fine aromatic variety obtained in the market at Port au Prince, Haiti.

79536. CARICA PAPAYA L. Papayaceae. **Papaya.**

St. Lucia Botanic Gardens. An excellent local variety.

79537 to 79545. From the Dominican Botanic Gardens.

79537. CATALPA LONGISSIMA (Jacq.) Sims. Bignoniaceae.

For previous introduction and description see No. 78580.

79538. COLVILLEA RACEMOSA Boj. Caesalpiniaceae.

For previous introduction and description see No. 78604.

79539. EUTERPE EDULIS Mart. Phoenicaceae. **Palm.**

A palm, native to Brazil, 40 feet high, with a slender inclined trunk, pinnate leaves, and fruits the size of marbles. A nutritious beverage is made by the natives from the fibrous flesh surrounding the seeds.

For previous introduction see No. 66218.

79540. GARCINIA MORELLA (Gaertn.) Desr. Clusiaceae.

A small tree, 30 to 50 feet high, which is related to the mangosteen and may be of use as a stock. It is native to India.

For previous introduction see No. 58589.

79541. KLEINHOVIA HOSPITA L. Sterculiaceae.

A fine Dombeyalike shrub up to 50 feet high, with heart-shaped leaves 4 inches long and lax clusters of small rose-colored flowers followed by inflated papery pods an inch long. It is native to the East Indies.

For previous introduction see No. 54985.

79533 to 79545—Continued.

79542. ORMOSIA MONOSPERMA (Swartz) Urban (*O. dasycarpa* Jacks). Fabaceae. **Necklace tree.**

A tree with compound leaves of five pairs of oblong leaflets, large rusty tomentose panicles of small blue flowers, and ovoid tomentose pods each containing a globose red seed with a black blotch. It is native to the West Indies.

For previous introduction see No. 66232.

79543. PONGAMIA PINNATA (L.) W. F. Wight (*P. glabra* Vent.). Fabaceae.

A tall, erect shade tree or sometimes a climbing shrub native to tropical Asia, with compound leaves composed of five to seven pairs of oblong leaflets and simple racemes of white flowers. The woody pods are about one-fourth inch thick and 1½ inches long. Because of its bright, handsome foliage this tree has been recommended as an ornamental for subtropical regions. It is said to withstand hurricanes.

For previous introduction see No. 74584.

79544. THRINAX MORRISII Wendl. Phoenicaceae. **Morris thatch palm.**

An attractive dwarf palm, native to the West Indies, up to 3 feet high, with palmate leaves which are glaucescent on the under side and have the segments free for more than half their length.

For previous introduction see No. 78508.

79545. TOUNATEA SIMPLEX (Vahl) Taub. (*Swartzia grandiflora* Willd.). Caesalpiniaceae.

An ornamental shrub with a single oblong coriaceous leaflet, or occasionally three leaflets, and corymbs of three to five flowers each having a single orbicular yellow petal an inch or more across.

79546. CINNAMOMUM MINDANAENSE Elmer. Lauraceae.

From Jolo, Sulu, Philippine Islands. Seeds presented by Gov. Carl M. Moore, through P. J. Wester, Ballston, Va. Received November 10, 1926. Numbered in March, 1929.

Kami. A small erect tropical tree, up to 30 feet high, with slender branches, smooth pale-green bark, and small pointed leathery leaves. The inconspicuous flowers are followed by numerous small shining steel-blue fruits. The bark is very similar to the cinnamon of commerce, and the tree has possibilities as a source of cinnamon.

79547. CUDRANIA TRICUSPIDATA Bureau Moraceae.

From Crescent, Ga. Cuttings obtained from James Deverger, through R. A. Young, Bureau of Plant Industry. Received March 5, 1928. Numbered in March, 1929.

A thorny shrub or small tree native to eastern Asia. The fruits, resembling clusters of red raspberries, are edible, and the plant has been recommended as a good hedge plant for the Southern States. The extremely hard wood is used for tools, and the ovate, usually entire leaves are used in some sections to feed silkworms.

For previous introduction see No. 71304.

79548. DENDROCALAMUS MACROCULMIS Hort. Poaceae. **Bamboo.**

From Algiers, Algeria, Africa. Culm presented by Dr. L. Trabut, Government botanist. Received March 29, 1928. Numbered in March, 1929.

A very distinct and valuable giant clump bamboo introduced from Cochin China by the Jardin des Plantes in Paris and sent to Algiers for trial, where there is now a splendid avenue in the Jardin d'Essais, of Algiers.

For previous introduction see No. 62251.

79549. GARCINIA sp. Clusiaceae.

From Buitenzorg, Java. Seeds presented by Dr. L. Koch, Chief, Plant Breeding Station for Annual Crops. Received October 19, 1928. Numbered in March, 1929.

An East Indian evergreen tree related to the mangosteen (*Garcinia mangostana*).

79550. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

From Caracas, Venezuela. Seeds presented by Dr. H. Pittier, Ministerio de Relaciones Exteriores, Museo Commercial. Received March 23, 1929.

A variety cultivated only in the State of Falcon, Venezuela. It is said to be exceptionally rich in oil.

79551 to 79554. TIGRIDIA PAVONIA (L. f.) Ker. Iridaceae. **Common tigerflower.**

From Paris, France. Bulbs purchased from Vilmorin-Andrieux & Co. Received March 28, 1929.

79551. Variety *alba.* White flowers with red spots in the throat.

79552. Variety *conchiflora.* Bright-yellow flowers.

79553. Variety *lilacea.* Lilac flowers with a spotted center.

79554. Variety *speciosa rubra.* A somewhat dwarf form with deep-red flowers, the interior of the cup being the same color as the limb.

79555. PRATIA BEGONIFOLIA (Wall.) Lindl. Campanulaceae.

From Sumatra. Seeds collected by Prof. H. H. Bartlett, University of Michigan, Ann Arbor, Mich. Received July 20, 1927. Numbered in March, 1929.

No. 7525. Between Simakkoek and Simartoloe, on the trail from Asahan to Toba, north of the Asahan River, April 23, 1927. A creeping vine with small cordate denticulate leaves and purple fleshy fruits half an inch long.

79556 and 79557. QUERCUS CERRIS L. Fagaceae. **Turkey oak.**

From Northwood, Middlesex, England. Seeds presented by R. C. B. Gardner. Received November 2, 1928. Numbered in March, 1929.

79556 and 79557—Continued.

79556. *D.* Variety *laciniata.*

For previous introduction and description see No. 78679.

79557. *E.*

For previous introduction and description see No. 78678.

79558. SANDORICUM KOETJAPE (Burm. f.) Merr. (*S. indicum* Cav.). Meliaceae. **Santol.**

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture. Received September 5, 1928. Numbered in March, 1929.

A Philippine tree which becomes 80 feet high in its native country, with trifoliolate hairy leaves and greenish yellow or straw-colored flowers. The chief value resides in its yellowish fruits which are rounded or flattened, about 2 inches in diameter, with rather large seeds inclosed in translucent, acid, edible pulp of good flavor. When peeled, quartered, and cooked in sirup the fruit makes a delicious preserve. This tree is not suited for cultivation in the United States except perhaps in the warmest parts of Florida.

For previous introduction see No. 58445.

79559. TILMIA CARYOTAEFOLIA (H. B. K.) O. F. Cook (*Martinezia caryotaefolia* H. B. K.). Phoenicaceae. **Palm.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Garden. Received May 31, 1927. Numbered in March, 1929.

A graceful palm up to 30 feet high, native to tropical South America. The erect stem is slightly swollen at the base and is clearly ringed; these rings are armed with stiff black slender spines 2 or 3 inches long. The bright-green pinnate fronds are 4 to 5 feet long, spreading and drooping.

For previous introduction see No. 73822.

79560 to 79565.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Java Botanic Gardens. Received August, 1926, and May, 1927. Numbered in March, 1929.

79560. ATTALEA SPECTABILIS Mart. Phoenicaceae. **Palm.**

An ornamental Brazilian palm which is stemless or with a very short caudex. The erect spreading pinnate leaves are 18 to 21 feet long; the lower segments are 3 to 4 feet and the upper 12 to 16 inches long.

For previous introduction see No. 43056.

79561 to 79563. BACCAUREA spp. Euphorbiaceae.

79561. BACCAUREA DULCIS Muell. Arg.

A tropical evergreen tree, 30 to 60 feet high, with smooth reddish-brown branches, alternate brownish oval-oblong leaves up to 7 inches long, reddish beneath, and round woody fruits about 1 inch in diameter in lax racemes. Native to the Malay Peninsula.

79562. BACCAUREA MOTLEYANA Muell. Arg.

79560 to 79565—Continued.

A large ornamental tropical Malayan evergreen tree with oval, entire, dark-green leaves 6 inches long and 4 inches wide and large clusters of small edible yellow berries of mildly acid flavor.

For previous introduction see No. 34495.

79563. BACCAUREA NANIHUA Merr.

A tropical Asiatic evergreen tree about 50 feet high, with brownish leathery oblong leaves up to 6 inches long.

79564. PITHECOLOBIUM LOBATUM Benth. Mimosaceae.

A small ornamental tropical tree with large curved red pods which contain bluish seeds.

For previous introduction see No. 35452.

79565. SAGUERUS LANGKAB Blume (*Arenga obtusifolia* Mart.). Phoenicaceae. **Palm.**

A Javanese palm, related to the sugar palm (*Arenga saccharifera*) of Malaya, with a spineless, thick-ringed trunk about 20 feet high and 9 to 13 pinnate leaves, about 15 feet long, which have spiny petioles.

For previous introduction see No. 67177.

79566. ARUNDINA CHINENSIS Blume. Orchidaceae.

From Singapore, Straits Settlements. Plant collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 19, 1926. Numbered in March, 1929.

No. 827. Singapore Botanic Gardens, May 31, 1926. A tropical terrestrial orchid with very beautiful flowers reminding one of a small cattleya. When grown in pots it becomes several feet high, and when not in flower it looks more like a bamboo than an orchid. It is grown on a large scale by nurserymen who sell the cut flowers in the markets of the Malay Archipelago.

79567. DRACAENA DRACO L. Liliaceae. **Dragontree.**

From Ajuda, near Lisbon, Portugal. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 21, 1927. Numbered in March, 1929.

No. 1296. April 4, 1927. Seeds from a remarkable specimen probably 300 years old, now growing in the Botanic Garden at Ajuda, once the Royal Quinta Cima of Queen Mary I. This tree is not over 10 or 15 feet high, but has a spread of about 40 feet. It is a curious ornamental tropical tree which becomes 60 feet high, with numerous crowded sword-shaped glaucous-green leaves, greenish flowers, and orange berries.

79568 and 79569.

From Sibolangit, Sumatra. Plant and stolons collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the Allison V. Armour expedition. Received May, 1926. Numbered in March, 1929.

79568 and 79569—Continued.

79568. GIGANTOCHLOA VERTICILLATA (Willd.) Munro. Poaceae. **Bamboo.**

No. 732. *Boeloeh Regen, Boeloeh Belangke.* Sibolangit Botanic Garden, March 28, 1926. A bamboo plant with culms over 4 inches in diameter, which is not the best of the giant clump bamboos in the mountains of Sumatra, but is largely grown in the lowlands about the kampongs because of its useful timber.

79569. GLOBBA sp. Zinziberaceae.

No. 437. Sibolangit Botanic Garden, February 24, 1926. Stolons of a herbaceous gingerlike plant with attractive pink flowers, which should be useful as a border plant in southern Florida and Panama.

79570. LIVISTONA OLIVAEFORMIS Mart. Phoenicaceae **Palm.**

From Singapore, Straits Settlements. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 29, 1926. Numbered in March, 1929.

No. 848. Singapore Botanic Gardens, May 30, 1926. A small handsome fan-leaved palm with olive-shaped, green to purplish-green fruits. Native to Java.

79571. MILLINGTONIA HORTENSIS L. f. Bignoniaceae.

From Peradeniya, Ceylon. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received July 19, 1926. Numbered in March, 1929.

No. 893. *Indian cork tree.* Peradeniya Botanic Garden, June 9, 1926. A tropical avenue tree of erect habit, becoming 50 feet or more high. It has finely divided leaves and pure-white fragrant long tubular flowers which are borne twice a year, during November and June.

79572. SCIRPUS SUPINUS L. Cyperaceae. **Sedge.**

From Gold Coast, Africa. Plants collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received April 29, 1927. Numbered in March, 1929.

No. 1267. *Diatamara.* A sedge native to tropical Africa, forming a solid field in a moist boggy spot, several acres in extent, north of Mamou, French Guinea, March 10, 1927. The natives say that in the dry season the cattle eat this to the exclusion of other grasses which are at that time dried up. Its succulent stems form a regular turf on which the cattle walk. It should be tried as fodder on swampy land.

79573 to 79903.

From Manchuria. Seeds presented by P. F. Constatinoff, Harbin, through E. D. Merrill, dean of the College of Agriculture of the University of California, Berkeley, Calif. Received in February, 1929.

79573 to 79576. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

From the Harbin Experiment Station.

79573. N 6. **79574.** N 7.

79573 to 79903—Continued.

79575. N 11. **79576.** N 23.

79577. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

79578. PANICUM MILIACEUM L. Poaceae **Proso.**

N 6. From the Harbin Experiment Station.

79579 and 79580. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

79579. N 257/1243. From the Anta Experiment Station, Chinese Eastern Railway.

79580. From Fugdin, on the Sungari River.

79581 and 79582. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

79581. From Fugdin, on the Sungari River.

79582. N 297. From the Anta Experiment Station, Chinese Eastern Railway.

79583 to 79887. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

79583 to 79610. From the Anta Experiment Station, Chinese Eastern Railway.

79583. N 42/1146.

79584. N 123.

79585. N 235/149 A.

79586. N 236/149 G.

79587. N 251/1261.

79588. N 252/1263.

79589. N 265/287 A.

79590. N 254/1148.

79591. N 260/75.

79592. N 262/93.

79593. N 265/100.

79594. N 267/1229.

79595. N 268/1230.

79596. N 270/1234.

79597. N 272/1236.

79598. N 277/44.

79599. N 279/56.

79600. N 282/61.

79601. N 286/3.

79602. N 287/11.

79603. N 288/12.

79604. N 298/13.

79605. N 240/225.

79606. N 291/18.

79607. N 292/21.

79608. N 293/22.

79609. N 247/1250.

79610. N 228.

79611 to 79642. From the Echo Experiment Station.

79611.

79573 to 79903—Continued.

79612.
79613.
79614.
79615.
79616. N 7.
79617. N 8.
79618. N 9.
79619. N 266 A.
79620. N 272.
79621. N 274.
79622. N 275.
79623. N 277.
79624. N 287.
79625. N 284.
79626. N 228.
79627. N 303.
79628. N 304.
79629. N 403.
79630. N 410.
79631. N 411.
79632. N 416.
79633. N 423.
79634. N 433.
79635. N 402.
79636. N 409.
79637. N 416.
79638. N 423.
79639. N 1128.
79640. N 1153.
79641. N 1198.
79642. N 1231.

79643. N 1250. Wan Sin Hei Shin Station, Echo.

79644 to 79649. From the Echo Experiment Station.

79644. N 1260.
79645. N 1261.
79646. N 1265.
79647. N 1272.
79648. N 1286.
79649. N 1801.

79650 to 79690. From the Manchurian Agricultural Co. experiment field.

79650. N 9/2.
79651. N 9/3.
79652. N 9/4.
79653. N 9/5.
79654. N 9/9.
79655. N 9/10.
79656. N 9/14.
79657. N 9/27.
79658. N 10/1.
79659. N 10/16.
79660. N 10/17.

79573 to 79903—Continued.

79661. N 12/11.
79662. N 12/28.
79663. N 14/8.
79664. N 14/13.
79665. N 14/26.
79666. N 14/27.
79667. N 15/26.
79668. N 16/10.
79669. N 18/8.
79670. N 19/12.
79671. N 19/26.
79672. N 21/11.
79673. N 24/7.
79674. N 31/7.
79675. N 31/16.
79676. N 42/8.
79677. N 42/9.
79678. N 42/22.
79679. N 43/14.
79680. N 70/2.
79681. N 70/10.
79682. N 73/3.
79683. N 78/3.
79684. N 78/8.
79685. N 82/3.
79686. N 85/5 A II.
79687. N 85/9.
79688. N 85/17.
79689. N 86/18.
79690. N 86/7.

79691 to 79736. From the Harbin Experiment Station.

79691.
79692.
79693.
79694. N 3.
79695. N 4.
79696. N 20.
79697. N 40.
79698. N 66.
79699. N 79.
79700. N 83.
79701. N 106.
79702. N 111.
79703. N 116.
79704. N 120.
79705. N 122.
79706. N 124.
79707. N 128.
79708. N 130.
79709. N 138.
79710. N 140.
79711. N 145.

79573 to 79903—Continued.

79712. N 158.
79713. N 170.
79714. N 177.
79715. N 179.
79716. N 181.
79717. N 182.
79718. N 183.
79719. N 187.
79720. N 190.
79721. N 193.
79722. N 195.
79723. N 199.
79724. N 210.
79725. N 221.
79726. N 228.
79727. N 230 A.
79728. N 425.
79729. N 1121.
79730. N 1185.
79731. N 1191.
79732. N 1125.
79733. N 1205.
79734. N 1228.
79735. N 1279.
79736. N 1 C.

79737 to 79772. From the Anta Experiment Station, Chinese Eastern Railway.

79737. N 2 A.
79738. N 2/6.
79739. N 5 A.
79740. N 7 A.
79741. N 12/10.
79742. N 17 A.
79743. N 20 B.
79744. N 24 C.
79745. N 37 A.
79746. N 37 B.
79747. N 37 C.
79748. N 39 B.
79749. N 84.
79750. N 99.
79751. N 100.
79752. N 101.
79753. N 102.
79754. N 128/16.
79755. N 201/2 C.
79756. N 202/2.
79757. N 254.
79758. N 211/17 A.
79759. N 225/71 D.
79760. N 223/70 G.
79761. N 226/20 D.

79573 to 79903—Continued.

79762. N 237/152 A.
79763. N 255/209.
79764. N 259/66.
79765. N 263.
79766. N 266.
79767. N 281/60.
79768. N 287.
79769. N 288.
79770. N 294.
79771. N 1215.
79772. N 1235.

79773 to 79788. From the Echo Experiment Station.

79773.
79774.
79775. N 226.
79776. N 256.
79777. N 257/6.
79778. N 258 C.
79779. N 259.
79780. N 260.
79781. N 262.
79782. N 263.
79783. N 227.
79784. N 1246.
79785. N 1253.
79786. N 1259.
79787. N 1268.
79788. N 1271.

79789 to 79810. From the Manchurian Agricultural Co. experiment field.

79789. N 1/12.
79790. N 12/11.
79791. N 17/15.
79792. N 22/5.
79793. N 43/14.
79794. N 46/5.
79795. N 48/1.
79796. N 50/10.
79797. N 50/13.
79798. N 52/15.
79799. N 53/22.
79800. N 55/3.
79801. N 61/22.
79802. N 63/13.
79803. N 63/16.
79804. N 77/1.
79805. N 78/8.
79806. N 82/3.
79807. N 83/3.
79808. N 84/5.
79809. N 85/3.
79810. N 210/11A.

79573 to 79903—Continued.

79811 to 79840. From the Harbin Experiment Station.

79811.

79812.

79813. N 55.

79814. N 61.

79815. N 65.

79816. N 70.

79817. N 71.

79818. N 77.

79819. N 125.

79820. N 126.

79821. N 132.

79822. N 136.

79823. N 145.

79824. N 147.

79825. N 154.

79826. N 155.

79827. N 163.

79828. N 167.

79829. N 169.

79830. N 173.

79831. N 174.

79832. N 184.

79833. N 189.

79834. N 191.

79835. N 201.

79836. N 203.

79837. N 251.

79838. N 259.

79839. N 260.

79840. N 299.

79841.

79842.

79843.

79844.

79845. Selection N 1 (N 9/3). From the Manchurian Agricultural Co. experiment field.

79846 to 79850. From the Anta Experiment Station, Chinese Eastern Railway.

79846.

79847.

79848.

79849.

79850.

79851. N 282. From the Echo Experiment Station.

79852. From Fugdin, on the Sungari River.

79853. From Fugdin, on the Sungari River.

79854 to 79857. From the Harbin Experiment Station.

79854. N 12.

79855. N 135.

79573 to 79903—Continued.

79856. N 143.

79857. N 149.

79858 to 79861. From the Mangow Experiment Station, Chinese Eastern Railway.

79858. 79860.

79859. 79861.

79862 to 79865. From the Sangache Experiment Station, Chinese Eastern Railway.

79862. 79864.

79863. 79865.

79866 to 79868. From the Shouchenpu Experiment Station, Chinese Eastern Railway.

79866. 79868.

79867.

79869 to 79873. From the Jaolaychou Experiment Station, Chinese Eastern Railway.

79869. 79872.

79870. 79873.

79871.

79874 to 79877. From the Taomin Experiment Station, Chinese Eastern Railway.

79874. 79876.

79875. 79877.

79878 to 79882. From the Tmanpo Experiment Station, Chinese Eastern Railway.

79878. 79881.

79879. 79882.

79880.

79883. From the Taomin Experiment Station, Chinese Eastern Railway.

79884 to 79886. From the Uchimiche Experiment Station, Chinese Eastern Railway.

79884. 79886.

79885. 79887.

79888 to 79892. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From the Harbin Experiment Station.

79888. N 4. 79891. N 14.

79889. N 5. 79892. N 17.

79890. N 11.

79893 to 79900. TRITICUM spp. Poaceae.

79893 to 79898. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

79893. [No data.]

79894. From the Sanchache Experiment Station.

79895. N 65. From the Harbin Experiment Station, and originally from Mukden.

79896. N 43. From the Russian Experiment Station, Harbin.

79897. N 81. From the Harbin Experiment Station.

79898. N 21. From the Harbin Experiment Station.

79573 to 79903—Continued.

79899. TRITICUM DICOCCUM Schrank. **Emmer.**

N 64. From the Harbin Experiment Station.

79900. TRITICUM DURUM Desf. **Durum wheat.**

N 85. From the Harbin Experiment Station.

79901. VICIA FABA L. Fabaceae. **Broadbean.**

79902. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

79903. ZEA MAYS L. Poaceae. **Corn.**

N 42.

79904 to 79929.

From Tiflis, Georgia, Russia. Seeds presented by the director, Botanic Garden. Received February 14, 1929.

79904. COLCHICUM SPECIOSUM Stev. Melanthiaceae.

A low bulbous plant with four or five shining green leaves about a foot long and showy dark-rose flowers often 6 inches in diameter which appear after the leaves have died away. It is native to the Caucasus.

For previous introduction see No. 67016.

79905 and 79906. EPHEDRA MAJOR PROCERA (Fisch. and Mey.) Aschers. and Graebn. Gnetaceae. **Jointfir.**

A leafless shrub, 4 to 5 feet high, native to the Caucasus, with stiff branches and nearly sessile flower clusters.

79905. Variety *chrysocarpa*. A golden-fruited variety.

79906. Variety *erythrocarpa*. A red-fruited variety.

79907. HYACINTHUS PARADOXUS (Boiss.) Fisch. and Mey. (*Bellevalia paradoxa* Boiss.). Liliaceae.

A wild hyacinth, native to Russia, with narrowly lanceolate leaves and spikes of intensely blue bell-shaped flowers.

79908 to 79919. IRIS spp. Iridaceae.

79908. IRIS ACUTILOBA Meyer.

A wild iris native to the Caucasus, with purple and fawn-colored flowers.

For previous introduction see No. 68158.

79909. IRIS CAUCASICA Hoffm.

A rather dwarf bulbous iris native from Asia Minor to Turkestan and ascending to 6,000 feet above sea level. It has about six bright-green, very narrow leaves 3 to 6 inches long, a short stem, and pale or bright-yellow flowers which appear in March or April.

For previous introduction see No. 67812.

79910. IRIS IBERICA Hoffm. **Iberian iris.**

A dwarf, nearly stemless iris, native to mountainous parts of Asia Minor, with narrow leaves 3 to 6 inches long and large flowers which have pale-brown outer segments blotched with purple brown, and pure white inner segments, although these colors are not constant.

For previous introduction see No. 68163.

79911. IRIS LYCOTIS Woron.

A species for which a description has not been found.

For previous introduction see No. 67916.

79912 to 79914. IRIS PUMILA L.

79912. Variety *luteis*. A form with light-yellow flowers.

79913. Variety *pallidis*.

79914. Variety *violaceis*. A form with violet flowers.

79915. IRIS RETICULATA Bieb. **Netted iris.**

A bulbous iris, native to Asia Minor, with short erect leaves about 1½ feet high, a very short stem, and fragrant bright-purple flowers which appear early in spring before the leaves develop.

For previous introduction see No. 68167.

79916. IRIS sp.

Received as *Iris sulphurea*, which is a synonym of *I. pumila*, but the seeds do not agree with that species.

79917. IRIS TALISCHI Forst.

An iris, native to Persia, of the section Pogoniris, with a large rhizome, thick wide obtuse sword-shaped leaves, and 12 to 30 yellow flowers.

79918. IRIS TASCHIA Hort.

A horticultural variety for which a place of publication has not been found.

For previous introduction see No. 68169.

79919. IRIS WINOGRADOWI Fomin.

An iris native to the Caucasus.

For previous introduction see No. 64301.

79920 to 79922. JUNIPERUS spp. Pinaceae. **Juniper.**

79920. JUNIPERUS FOETIDISSIMA Willd.

Variety *squarrosa*. A form with spreading or recurved branches. The usual type is an evergreen tree, native to southern Europe, up to 15 feet high, with upright branches. The young twigs, when rubbed, emit a disagreeable odor.

79921. JUNIPERUS ISOPHYLLOS Koch.

A shrubby oriental tree with light-brown bark and ovate leaves. It differs from *J. pseudosabina* in being smaller and having keeled leaves. Native to Asia Minor.

For previous introduction see No. 64302.

79922. JUNIPERUS OXYCEDRUS L. **Prickly juniper.**

An ornamental evergreen tree, native to Europe, about 15 feet high,

79904 to 79929—Continued.

with light-green foliage covered somewhat with a whitish bloom. It is reported to thrive in dry rocky places.

79923 to 79927. PAEONIA spp. Ranunculaceae. **Peony.**

79923. PAEONIA ABCHASICA Hort.

A horticultural variety for which a place of publication has not been found.

For previous introduction see No. 64303.

79924. PAEONIA MLOKOSEWITSCHI Lomakin.

A herbaceous perennial peony with dark bluish-green biternate leaves with red nerves and margins and yellow flowers, 4 to 5 inches in diameter, which have numerous stamens and purple stigmas. This peony, considered the handsomest of the yellow-flowered forms, is native to the central Caucasus.

For previous introduction see No. 64304.

79925. PAEONIA TENUIFOLIA L. **Fringed peony.**

A hardy herbaceous perennial a foot or more high, densely leafy, with ternate, much-divided leaves and an erect dark-crimson flower about 3 inches across. It is native to the Caucasus region.

79926. PAEONIA TRITERNATA Pall.

A herbaceous peony, native to Siberia, usually about 3 feet high, with triternate leaves and purple flowers.

For previous introduction see No. 67050.

79927. PAEONIA WITTMANNIANA Hartwiss.

A herbaceous perennial, native to the Caucasus, 2 to 3 feet high, with biternate leaves 4 to 8 inches long and flowers, about 4 inches across, which are solitary, pale yellow, greenish or nearly white.

For previous introduction see No. 64306.

79928. SCILLA ROSENI Koch. Liliaceae. **Squill.**

A bulbous plant, native to the Caucasus, with linear-oblong leaves and small white flowers.

79929. ULMUS ELLIPTICA Koch. Ulmaceae. **Elm.**

A tree, native to Armenia, with pubescent branchlets, elliptical leaves 3 to 6 inches long, and obovate fruits.

For previous introduction see No. 67926.

79930 to 79956.

From Blackwood, South Australia. Seeds presented by Edwin Ashby. Received February 16, 1929.

79930. ALYOGYNE HAKEAEFOLIA (Giordano) Alefeld (*Fugosia hakeaefolia* Hook.). Malvaceae.

An erect evergreen shrub, native to Australia, with narrow lobed or deeply cut leaves and large purple-lilac flowers. It is closely related to Gossypium.

79930 to 79956—Continued.

For previous introduction see No. 65221.

79931. BEAUFORTIA sp. Myrtaceae.

Perongorups Mountains, Western Australia. An ornamental evergreen dwarf bush native to Australia.

79932. CALLISTEMON BRACHYANDRUS Lindl. Myrtaceae. **Bottlebrush.**

A pendulous form of this large bushy evergreen shrub. It is 12 to 15 feet high, native to northern Australia, with linear-subulate rigid leaves an inch or more long and loose spikes of flowers with showy deep-red stamens.

79933. CALLITRIS DRUMMONDII (Parl.) Benth. and Hook. Pinaceae.

Kangaroo Island, South Australia. A dwarf, compact, cypresslike tree with bright-green foliage. It is native to South Australia, where it thrives under semiarid conditions.

For previous introduction see No. 51283.

79934 to 79937. CALOTHAMNUS spp. Myrtaceae.

79934. CALOTHAMNUS ASPER Turcz.

A hairy evergreen shrub, native to Western Australia, with crowded, linear, flat leaves and short, dense clusters of flowers with crimson stamens.

For previous introduction see No. 67069.

79935. CALOTHAMNUS QUADRIFIDUS Ait.

An erect evergreen shrub 7 feet high, native to Western Australia, with crowded linear leaves about an inch long, somewhat like those of Hakea, and dense spikes of flowers which are conspicuous only because of the long, rich crimson stamens.

For previous introduction see No. 67071.

79936. CALOTHAMNUS SANGUINEUS Labill.

A tall evergreen shrub, 6 to 12 feet high, with subulate terete leaves about an inch long and flowers with blood-red stamens as long as the leaves. It is native to Western Australia.

79937. CALOTHAMNUS sp.

Murchison, Western Australia. A downy dwarf evergreen shrub native to Australia.

79938. EREMAEA sp. Myrtaceae.

Geraldton, Western Australia. An orange-flowered shrub up to 4 feet high, native to Australia.

79939 to 79948. GREVILLEA spp. Proteaceae.

79939. GREVILLEA BIPINNATIFIDA R. Br.

A prostrate or diffuse evergreen shrub 3 to 4 feet high, native to Western Australia. The broadly ovate leaves, 4 inches long and 3 inches wide, are twice divided into wedge-shaped segments. The silky pubescent red flowers are in loose racemes 4 inches long or gathered together into a large terminal panicle.

79940. GREVILLEA BUXIFOLIA (J. E. Smith) R. Br.

79930 to 79956—Continued.

An evergreen shrub about 6 feet high, which stands cutting back well and produces an abundance of small pink flowers. It is native to South Australia.

For previous introduction see No. 49364.

79941. GREVILLEA ERICIFOLIA R. Br.

A low evergreen shrub of spreading habit, about 2 feet high, with sessile linear or lanceolate leaves and short terminal racemes of red and yellowish flowers. It is native to southeastern Australia.

79942. GREVILLEA ILICIFOLIA R. Br.

A large spreading evergreen shrub, native to South Australia, with prickly hollylike leaves 1 to 2 inches long and small flowers in terminal racemes.

79943. GREVILLEA LAVANDULACEA Schlecht.

Variety *malleensis*. A variety native to South Australia where it grows from a foot to a foot and a half high on a sandy or clayey subsoil, but it seems to prefer broken rock soil (quartzite). It does very well on rockeries and should be treated as a rock plant. The leaves are pungent, and the crimson flowers, at each axil all along the branches, are borne from the beginning of the winter until late spring in Australia.

79944. GREVILLEA OLEOIDES Sieber.

From The Grampians, Victoria. An erect evergreen shrub, 4 to 5 feet high, closely allied to *G. punicea*, with lanceolate leaves 2 to 4 inches long and sessile racemes of bright-red flowers. It is native to southeastern Australia.

79945. GREVILLEA OLEOIDES DIMORPHA (F. Muell.) Benth.

A variety with more rigid foliage, lanceolate in some specimens and linear in others, and usually smaller flowers.

79946. GREVILLEA PRITZELII Diels.

An evergreen shrub, native to Australia, with brown-hairy branchlets, linear sickle-shaped leaves 3 to 5 inches long, and racemes, 2 to 3 inches long, of white flowers covered with dense white tomentum.

For previous introduction see No. 76640.

79947. GREVILLEA PUNICEA R. Br.

An erect evergreen shrub, 4 to 5 feet high, with small elliptic-oblong leaves and crimson flowers in short dense terminal racemes. It is native to New South Wales.

79948. GREVILLEA ROSMARINIFOLIA A. Cunn.

An erect evergreen shrub, native to New South Wales, about 5 feet high, with hairy branches, erect crowded linear-subulate leaves, and short dense racemes of red flowers.

79949. HAKEA sp. Proteaceae.

An ornamental evergreen shrub, native to Western Australia, with long spikes of scarlet flowers.

79930 to 79956—Continued.

79950. HIBISCUS SPLENDENS Fras. Malvaceae.

From north of Cairns, Queensland. A tall handsome shrub 12 to 20 feet high, native to southern Australia, densely hairy, with prickly branches, palmately lobed heart-shaped leaves, and large, showy rose-colored flowers 6 inches or more across.

79951. HOVEA ELLIPTICA (J. E. Smith) DC. Fabaceae.

A leguminous evergreen shrub up to 10 feet high, with slender branches, small narrowly oval leaves, and short axillary clusters of small blue flowers. It is native to Western Australia.

For previous introduction see No. 64487.

79952. HOVEA PUNGENS Benth. Fabaceae.

A rigidly erect evergreen shrub, 1 to 2 feet high, with linear-lanceolate coriaceous sharp-pointed leaves less than an inch long. The branches are covered from the bottom to the top with clusters of deep-blue flowers.

For previous introduction see No. 76641.

79953. KUNZEA PARVIFLORA Hort. Myrtaceae.

A dwarf evergreen shrub with very showy crimson flowers. Native to Australia.

79954. OXYLOBIUM LANCEOLATUM (Vent.) Druce (*O. callistachys* Benth.). Fabaceae.

A tall evergreen shrub, native to Australia, with whorls of lanceolate leaves 3 to 5 inches long and yellow flowers in dense terminal racemes 6 inches long.

For previous introduction see No. 76941.

79955. SWAINSONA GALEGIFOLIA (Andrews) R. Br. (*S. coronillifolia* Salisb.). Fabaceae.

A shrubby perennial, native to Australia, climbing to a height of several feet, with 1 to 21 small oblong leaflets and large deep-red, pink, or white flowers. *Swainsona coronillifolia* probably represents the horticultural variety *violacea*, which has rose-violet flowers. This species is said to be poisonous to stock.

For previous introduction see No. 77447.

79956. THRYPTOMENE sp. Myrtaceae.

From Geraldton, Western Australia. A dwarf evergreen bush or shrub with a mass of pink flowers which were borne at Blackwood between June and September.

79957. TRACHYPHRYNIUM sp. Marantaceae.

From Cameroon, West Africa. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received March 25, 1927. Numbered in January, 1929.

No. 1174. Victoria Botanic Garden. A tall branching shrub, native to west tropical Africa, with leafy stems and small inconspicuous flowers.

79958 to 79970. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From San Juan, Porto Rico. Seeds presented by O. W. Barrett, Agricultural Director, Bureau of Agricultural Development. Received March 27, 1929.

79958. *Americano.*

79959. *Areïbenos 4447.*

79960. *Chagaros.*

79961. *Cubanos 4349.*

79962. *French 1624.*

79963. *Horacios.*

79964. *Larenos 4446.*

79965. *Mites.*

79966. *Negritos.*

79967. *Pepinenos 4445.*

79968. *Pinto Moro.*

79969. *San Salvador 4258.*

79970. *Silvios.*

79971. PINUS SYLVESTRIS L. Pinaceae.

From Manchuria, China. Seeds presented by V. K. Roerich, through V. Golubzoff, Harbin, Manchuria. Received February 2, 1929.

Variety *mongolica.* A Mongolian form of the Scotch pine.

79972. ALSTONIA MACROPHYLLA Wall. Apocynaceae.

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens. Received March 30, 1929.

A tall Malayan evergreen tree with milky juice, oblanceolate leaves a foot long, and terminal clusters of small white flowers.

For previous introduction see No. 58390.

79973. ORCHIDANTHA LONGIFLORA (Scort.) Ridley. Musaceae.

From Peradeniya, Ceylon. Plants presented by W. Small, Acting Director, Department of Agriculture. Received March 30, 1929.

For previous introduction and description see No. 79530.

79974. FICUS CARICA L. Moraceae. **Common fig.**

From Hereford, England. Plant and scions purchased from King's Acre Nurseries. Received March 30, 1929.

Brown Turkey fig.

79975. CRYPTOSTEGIA sp. Asclepiadaceae. **Lombiro rubber.**

From Madagascar. Seeds presented by Dr. J. O. Dyrnes, through John S. Richardson, jr., American vice consul, Tananarive, Madagascar, at the request of Charles F. Swingle, Bureau of Plant Industry. Received March 11, 1929.

These seeds were collected by Doctor Dyrnes at Manasoa (Benenitra), Tullear, Madagascar, from native vines that produce the Lombiro rubber.

79976 to 79979. AGAVE spp. Amaryllidaceae.

From Naples, Italy. Seeds purchased from M. Herb. Received March 30, 1929.

79976. AGAVE CAESPITOSA Tod.

A cespitose, nearly stemless century plant, 3 feet high, with fleshy light-green acuminate leaves which have brown prickly margins. The small greenish flowers are on a long tenuous almost-nodding scape about 10 feet high.

79977. AGAVE HORRIDA Jacobi.

A herbaceous perennial, native to central Mexico, with a rosette of oblanceolate glossy green flat spreading leaves having the large irregular prickles joined by a wide horny margin. The stalk of the inflorescence is moderately slender, and the yellowish or purplish-green flowers are 1 to 2 inches long.

79978. AGAVE MITRAEFORMIS Jacobi (*A. bonnettiana* Hort.).

A herbaceous perennial, native to southern Mexico, with a rosette of prickly margined recurved obovate leaves 2 to 3 feet long and a flower stalk, 15 to 20 feet high, bearing a loose panicle of large yellow flowers 2 to 3 inches across.

79979. AGAVE UNIVITTATA Haw.

A stemless Mexican century plant with narrow-lanceolate leaves, a foot or more long, elongated into a stout brown spine, with brown horny margins.

79980 to 79991.

From Winchester, England. Plants purchased from Hillier & Sons, West Hill Nurseries. Received March 30, 1929.

79980 to 79990. DAPHNE spp. Thymelaeaceae.

79980. DAPHNE ACUTILOBA Rehder.

For previous introduction and description see No. 79199.

79981. DAPHNE CNEORUM L. **Rose daphne.**

For previous introduction and description see No. 79204.

79982. DAPHNE COLLINA NEAPOLITANA (Lodd.) Lindl.

An evergreen shrub, native to Italy, about 3 feet high, with smooth, narrow, oblong leaves about an inch long and loose heads of rosy purple flowers.

79983. DAPHNE GNIDIUM L.

For previous introduction and description see No. 79474.

79984. DAPHNE HOUTTEANA Planch.

A handsome evergreen shrub with deep-purple lanceolate half-leathery leaves and small cymes of violet-lilac flowers. It is possibly a hybrid between *Daphne mezereum* and *D. laureola.*

79985. DAPHNE LAUREOLA L.

For previous introduction and description see No. 79057.

79986. DAPHNE LAUREOLA PHILIPPI (Gren. and Godr.) Meisn.

For previous introduction and description see No. 79210.

79980 to 79991—Continued.

79987. DAPHNE OLEOIDES Shreb. (*D. buxifolia* Vahl). **Olive daphne.**

For previous introduction and description see No. 79202.

79988 and 79989. DAPHNE PETRAEA Leyb. (*D. rupestris* Facch.).

79988. For previous introduction and description see No. 79212.

79989. Variety *grandiflora*. A large-flowered form.

79990. DAPHNE RETUSA Hemsl.

An evergreen densely branched shrub, native to western China, up to 3 feet high, with cuneate-oblong usually emarginate leaves from 1 to 3 inches long and fragrant, rosy purple flowers, white inside, about an inch across, in terminal heads.

79991. ERICA VAGANS L. Ericaceae. **Cornish heath.**

For previous introduction and description see No. 79158.

79992 to 80018.

From Bengal, India. Bulbs and roots purchased from R. B. and D. S. Pradhan, the Chandra Nursery. Received in February, 1929.

79992. AGAPANTHUS AFRICANUS (L.) Hoffmannsegg (*A. umbellatus* L'Her.). Liliaceae. **African lily.**

Variety *Minor moorianus*. A slender-leaved dwarf variety.

79993. CRINUM POWELLII Baker. Amaryllidaceae. **Powell crinum.**

A bulbous plant with about 20 spreading strap-shaped leaves 3 to 4 feet long and about 8 rose-colored flowers in large showy heads terminating a scape a foot or more high. It is considered to be a hybrid between *Crinum longifolium* and *C. moorei*.

79994 to 80008. HEDYCHIUM spp. Zingiberaceae. **Gingerlily.**

79994. HEDYCHIUM AURANTIACUM Wall.

A leafy alpine perennial about 5 feet high, with lanceolate leaves a foot or more long and 2 to 3 inches wide. The delicate orange flowers, with orange-yellow patches, are in a spike 6 inches to a foot long. It is native to the mountains of Nepal.

79995. HEDYCHIUM CHANDRABIRIANUM Hort.

A hybrid bearing fragrant white flowers with yellow patches very early in the season.

79996. HEDYCHIUM COCCINEUM Buch.-Ham.

Variety *angustifolium*. A gingerlike plant up to 5 feet high, with narrow leaves and dull brick-red flowers, shading to crimson, in a spike about 15 inches long.

79997 to 79999. HEDYCHIUM CORONARIUM Koen. **Common gingerlily.**

79997. Variety *chrysoleucum*. A variety in which the highly scented flower has a white lip with a large yellow patch in the center.

79992 to 80018—Continued.

79998. Variety *flavescens*. Flowers very fragrant and yellow with a deeper yellow patch.

79999. Variety *maximum*. A variety with a taller stem and white flowers with faint orange patches.

80000. HEDYCHIUM ELATUM R. Br.

A gingerlike plant 5 feet high, with narrow-oblong leaves a foot or more in length and white flowers marked with pink, about 2 inches long, in stout spikes nearly a foot high. It is native to the subtropical Himalayas.

80001. HEDYCHIUM GARDNERIANUM Roscoe. **India gingerlily.**

A tall tender leafy perennial, native to India, with narrow sessile leaves and a terminal spike of light-yellow flowers which are succeeded by showy red fruits.

80002. HEDYCHIUM GHALII Hort.

A hybrid with scented white flowers, marked with yellow, borne in a spike over a foot long.

80003. HEDYCHIUM GREENII W. W. Smith.

A leafy subtropical perennial, native to Bhutan, India, about 5 feet tall, with narrow-oblong leaves up to a foot long and red flowers in dense spikes about 5 inches long.

80004. HEDYCHIUM PRADHANII Hort.

A hybrid with spikes over a foot long, of mildly scented flowers which are white with a flesh-pink patch.

80005. HEDYCHIUM SAMSHERII Hort.

A hybrid with spikes about a foot long, of delicate orange flowers with a deeper patch.

80006. HEDYCHIUM SPICATUM ACUMINATUM Wall.

A leafy perennial, native to the Himalayas, up to 4 feet high, with narrow-oblong leaves a foot or more long, with pale-yellow or white flowers in a rather lax spike about a foot long.

80007. HEDYCHIUM THYRSIFORME J. E. Smith.

A tender leafy perennial, native to the Himalayas, usually about 5 feet high, with finely hairy leaves up to a foot long and 4 inches wide and mildly scented white flowers in a dense spike.

80008. HEDYCHIUM VILLOSUM Wall.

A leafy alpine perennial, native to the Himalayas, with narrow-oblong leaves, a foot or less long, pubescent above, and cream-colored flowers, about 2 inches long, in spikes 6 inches to a foot high.

80009. IRIS sp. Iridaceae.

An alpine iris from the Himalayas.

80010 to 80013. LILIUM spp. Liliaceae. **Lily.**

80010. LILIUM GIGANTEUM Wall. **Giant lily.**

For previous introduction and description see No. 78853.

79992 to 80018—Continued.

80011. LILIUM NEILGHERRENSE Wight.

A tender lily from the Neilgherry Hills, India, which resembles in a general way the hardy *L. regale* of China. It differs in its more slender, less widely open trumpet-shaped flowers which are greenish white without and pure white within.

80012. LILIUM SULPHUREUM Baker.

A handsome trumpet lily, native to northern Burma at such elevations that it is as far north as Philadelphia, with erect stems 6 to 7 feet high, and somewhat broader leaves than those of *L. neilgherrense*. It resembles more closely the northern *L. sargentiae*, and, like it, bears bulbils in the axils of the leaves. The yellowish white flowers are stained with brown on the outside and deeper yellow in the throat.

80013. LILIUM WALLICHIANUM Schult. f.

For previous introduction and description see No. 78854.

80014. NIOBE sp. (*Funkia* sp.). Liliaceae. **Plantainlily.**

The plantainlilies are herbaceous perennials, mostly native to China and Japan, with large masses of root leaves and white or bluish flowers in loose spikes.

79992 to 80018—Continued.

80015 to 80018. ZEPHYRANTHES spp. Amaryllidaceae. **Zephyrlily.**

80015. ZEPHYRANTHES CANDIDA (Lindl.) Herb. **Autumn zephyrlily.**

A subtropical bulbous plant with linear leaves a foot long, appearing with the flowers; these are white, often rose tinted on the outside, and about 2 inches long. It is native to Argentina.

80016. ZEPHYRANTHES ROBUSTA (Herb.) Baker.

A tender bulbous plant, native to Argentina, 6 to 9 inches high, with glaucous linear leaves which appear after the very large showy flowers. The latter are a delicate pink and about 2½ inches long.

80017. ZEPHYRANTHES ROSEA Lindl. **Pink zephyrlily.**

An autumn-blooming tender bulbous plant, native to Cuba, with linear bright-green leaves and rose-colored flowers an inch long, on a slender peduncle 4 to 6 inches long.

80018. ZEPHYRANTHES SULPHUREA Hort.

A tender bulbous plant with bright-yellow flowers.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 99

Washington, D. C. ▼ Issued November, 1930

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1929 (Nos. 80019–80810)

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INTRODUCTORY STATEMENT

The present inventory of the materials received between April 1 and June 30, 1929 (F. P. I. 80019–80810), is a record of the seeds and plants that came in through the Office of Foreign Plant Introduction by exchange, gift, and purchase. It does not in any way record the materials on hand, nor can it serve as a basis for request from experimenters.

To illustrate the point more specifically, the numerous palms may be cited. These were assembled for the specific purpose of growing plants for permanent planting at the United States Plant Introduction Garden at Chapman Field near Coconut Grove, Fla., to become a future source of seed. Plants from these seeds will not be available until they themselves produce seed, which in most cases will be a matter of many years. Other plants from which propagating material can be had more rapidly will be more rapidly available.

It is most unfortunate that these delays must occur or that this explanation should be given again and again, but inquiries for unavailable material are received too frequently to warrant its omission.

In addition to the considerable list of palms for testing in the South, there is a large group of *Ficus* spp. (80417–80421), not including the collection of fig varieties (80150–80153) from Tunis, and those (80294–80299) that came with a collection of grape cuttings (80300–80303) from Haifa, Palestine. These trees and shrubs are for careful testing in the extreme South as possible ornamentals.

This inventory records a collection of seeds (80060–80074) from South Yarra, Melbourne, Victoria, Australia, that contains several acacias, a eucalyptus, and several vines and trees not previously introduced.

Nos. 80076–80088 record a collection of seeds from the Lloyd Botanic Garden, Darjiling, India, including several barberries not yet well known in the United States, the difficult *Iris clarkei*, and several other ornamental plants not well established in this country.

Possibly more than anything else, the inventory is notable for the large collections which reflect the operations of W. F. Morse and P. H. Dorsett, now traveling in the Orient particularly to find new strains and varieties of soybeans that are expected to prove useful for American farms.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., May 10, 1930.

316—30——1

INVENTORY[1]

80019 to 80030. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Latvia. Seeds obtained through William Stuart, Bureau of Plant Industry. Received December, 1928. Numbered in May, 1929.

80019. No. 1.	80025. No. 7.
80020. No. 2.	80026. No. 8.
80021. No. 3.	80027. No. 9.
80022. No. 4.	80028. No. 10.
80023. No. 5.	80029. No. 11.
80024. No. 6.	80030. No. 12.

80031. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

From Keijo, Chosen. Seeds presented by John V. Lacy, Korea Council of Religious Education. Received May 2, 1929.

This cucumber is said to have a flavor superior to that of the ordinary varieties found in the United States. The fruit is slightly smaller, but in addition to the rich flavor it has small seeds and sometimes is almost seedless.

80032. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Tela, Honduras. Seeds presented by Alfred F. Butler, Horticulturist of the Research Department of the United Fruit Co. Received May 2, 1929.

Variety *pimpinellifolium*. From the La Fragua farm. A vigorous and comparatively hardy South American variety, sometimes called the "currant tomato," which grows wild in Peru and Brazil. The red fruits, somewhat larger than a large currant, are produced in racemes of eight or nine, and are excellent for preserving. This variety is quite common in Honduras.

For previous introduction see No. 56797.

80033. SPARTINA TOWNSENDI H. and J. Groves. Poaceae. **Grass.**

From Poole, Dorset, England. Plants purchased from Bob Cartridge, through H. N. Vinall, Bureau of Plant Industry. Received April 27, 1929.

Prof. F. W. Oliver, University College, London, regards *Spartina townsendi* as a probable hybrid between *S. stricta* and *S. alterniflora*. It appeared at Hythe, Southampton, England, about 1879, and has spread rapidly on the mud flats, reclaiming the land. It is eaten eagerly by cattle and pigs and is also promising as a paper-making material, but at present the cost of harvesting is large.

For previous introduction see No. 58986.

80034. PHYLLOSTACHYS EDULIS (Carr.) H. de Lehaie. Poaceae. **Bamboo.**

From Anderson, S. C. Rhizomes presented by Rufus Fant about April 15, 1926, and subsequently grown at the Barbour Lathrop Plant introduction Garden, Savannah, Ga. Numbered in May, 1929.

The rhizomes of this giant hairy-sheath edible bamboo were taken from the bamboo grove in the city cemetery at Anderson, one of several groves of this bamboo started by Mr. Fant from the increase from a plant he procured about 1890 or 1893 from an importer on the Pacific coast. It was understood to have come from Japan.

80035. PISTACIA INTEGERRIMA Stewart. Anacardiaceae. **Pistache.**

From Kew, England. Seeds presented by Dr. W. J. Bean, Curator, Royal Botanic Gardens. Received May 4, 1929.

A large tree up to 40 feet high, native to the warm slopes of the Himalayas in northern India. The aromatic pinnate leaves are made up of four to five pairs of lanceolate leaflets with an oblique base. The small inconspicuous flowers are in racemose clusters and are followed by the bright-green drupes which are about a fourth of an inch across. This tree yields the famous zebra wood of India.

For previous introduction see No. 36065.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

80036 to 80040.

From Miyazaki, Japan. Cuttings presented by Shigeki Matsubara, Miyazaki College of Agriculture. Received May 6, 1929.

80036. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

Aohada. A variety used extensively by the Japanese as a stock on which the better varieties are grafted.

80037 to 80040. VITIS VINIFERA L. Vitaceae. **European grape.**

80037. *Chikuma.* **80039.** *Kôshû.*

80038. *Enshin.* **80040.** *Zenkôji.*

80041. CASTANOPSIS sp. Fagaceae. **Evergreen chinquapin.**

From Sandakan, British North Borneo. Seeds presented by D. D. Wood, Conservator of Forests. Received April 22, 1929.

80042. BAUHINIA MALABARICA Roxb. Caesalpiniaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received April 13, 1929.

A small erect bushy tree, with thick rigid deeply bifid somewhat heart-shaped leaves 2 to 3 inches long. The small white flowers are in dense sessile axillary clusters. The rather turgid, straight, firm, narrow pods are a foot long. Its native habitat is the mountainous country of northeastern India.

For previous introduction see No. 52746.

80043. SPARTINA TOWNSENDI H. and J. Groves. Poaceae. **Grass.**

From London, England. Seeds presented by Prof. F. W. Oliver, University College, through H. N. Vinall, Bureau of Plant Industry. Received May 6, 1929.

Seeds gathered from plants growing in the Netherlands which had originated in roots obtained from Poole, England, in 1925.

For previous introduction and description see No. 80033.

80044. PINUS INSULARIS Endl. Pinaceae. **Pine.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received April 24, 1929.

A tall 3-needle tropical pine which grows on the highlands in the Philippine Islands between altitudes of 3,000 and 8,000 feet. The flaccid slender leaves are 7 to 9 inches long, and the ovoid cones are about 3 inches long.

80045. (Undetermined.)

From West Africa. Seeds presented by G. W. Harley, Methodist Episcopal Mission, Ganta, Liberia. Received May 6, 1929.

A shrub or small tree growing in the interior of Liberia at an altitude of 1,000 feet. The fruits resemble the American cultivated black cherry in flavor, though they are much more acid, perhaps more closely approaching the flavor of the cranberry.

80046. IPOMOEA MACALUSOI Mattei. Convolvulaceae. **Morning-glory.**

From Italian Somaliland, Africa. Seeds collected by Dr. Mario Calvino, San Remo, Italy. Received May 7, 1929.

A very floriferous morning-glory, native to Italian Somaliland, with pubescent woody stems, broadly cordate villous leaves on long petioles, and axillary cymes of large campanulate orange-colored flowers margined with red.

80047. FICUS CONORA King. Moraceae. **Fig.**

From Summit, Canal Zone. Cuttings presented by J. E. Higgins, Director, Canal Zone Experiment Gardens. Received May 3, 1929.

A tree, native to New Guinea, with softly pubescent branchlets, lanceolate entire leaves 7 inches long, pubescent beneath, and turbinate fruits, an inch in diameter, borne on long flexuose leafless branches arising at the base of the trunk.

For previous introduction see No. 77658.

80048. CARICA CAULIFLORA Jacq. Papayaceae.

From Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received April 29, 1929.

This relative of the papaya is a tree 9 to 12 feet high, which is cultivated and probably native to Central America and Mexico. The trunk is crowned with large leaves that are cordate at the base and have the tip lobed about half way down into acuminate segments. The inconspicuous inodorous flowers are followed by ovoid yellow fruits 3 to 4 inches long.

80049. CYRILLA RACEMIFLORA L. Cyrillaceae. **Leatherwood.**

From Germantown, Philadelphia, Pa. Seeds purchased from Conyers B. Fleu. Received April 29, 1929.

A shrub or small tree up to 30 feet high, native from Virginia to Florida and Texas and extending to the West Indies and northern South America. The lustrous bright-green oblong leaves, 2 to 3 inches long, are evergreen in the South and turn to orange and scarlet in the northern deciduous form which is hardy as far north as New York. The small white flowers are borne in graceful racemes.

80050 and 80051. ORYZA SATIVA L. Poaceae. **Rice.**

From Pargannas District, Bengal, India. Seeds obtained through Robert Frazer, American Consul General, Calcutta, India. Received April 29, 1929.

80050. *Dakhina Patnai.* A variety grown in the saline southern tracts of Pargannas District, especially in the Sunderbuns, the delta of the Ganges.

80051. *Uttara Patnai.* A sweet variety grown in the northern tract of Pargannas District.

80052. DEGUELIA TRIFOLIATA (Lour.) Taub. (*Derris uliginosa* Benth.). Fabaceae.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director of the Java Botanic Gardens. Received April 24, 1929.

80052—Continued.

A large, handsome, leguminous woody climber native to Burma and the East Indies. The compound leaves are a foot or more long, with 9 to 13 leaflets, and the bright-red flowers, three-fourths of an inch long, are in lax racemes. The roots, which yield an effective insecticide, are used in India as a fish poison.

For previous introduction see No. 69379.

80053. BARLERIA LUPULINA Lindl. Acanthaceae.

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, Director of the Agricultural Experiment Station of the Office of Experiment Stations of the United States Department of Agriculture. Received May 3, 1929.

A compact bush, about 2 feet high, with long narrow dark-green leaves having rose-colored midribs and yellow flowers. It seeds freely, withstands dry weather remarkably well, is easily grown from soft wood cuttings, and makes a very ornamental hedge. Because of its seeding habits it is a bad weed if allowed to spread. It might be crossed with *Barleria cristata* to get a seedless form that would withstand dry weather better and be less subject to scale than the latter.

80054. PRIMULA ANISODORA Balf. and Forr. Primulaceae. **Primrose.**

From Ipswich, England. Seeds purchased from Thompson & Morgan. Received May 3, 1929.

A primrose about a foot and a half high, native to Yunnan, China, with broadly oval membranous leaves up to 8 inches long and whorls of aromatic flowers which are rich maroon-crimson with a bright-yellow zone. This primrose belongs to the Candelabra section.

80055 to 80059.

From Enfield, Middlesex, England. Plants purchased from Perry's Hardy Plant Farm. Received April 6, 1929.

80055 to 80058. CHRYSANTHEMUM MAXIMUM Ramond. Asteraceae. **Pyrenees chrysanthemum.**

80055. *Conqueror.*

80056. *Laciniata.*

80057. *Moonlight.*

80058. *Plenum.*

80059. HELENIUM AUTUMNALE L. Asteraceae. **Sneezeweed.**

Baronne de Linden.

80060 to 80074.

From South Yarra, Melbourne, Victoria, Australia. Seeds presented by F. J. Rae, Director of the Melbourne Botanic Gardens. Received April 22, 1929.

80060 to 80064. ACACIA spp. Mimosaceae.

80060. ACACIA FALCATA Willd. **Burra.**

An evergreen tree, 20 to 30 feet high, with few slender branches and small yellow flowers in dainty spherical clusters on racemes borne in the axils of the dark glossy green falcate leaves. The timber is hard, heavy, and tough.

For previous introduction see No. 75589.

80060 to 80074—Continued.

80061. ACACIA LONGIFOLIA SOPHORAE (Labill.) F. Muell.

A yellow-flowered, rapid-growing evergreen shrub or small tree, 15 to 20 feet high, excellent for preventing the encroachments of the sea along sandy coasts. It frequents the seacoast of southeastern Australia from southern Queensland to South Australia, and also Tasmania.

For previous introduction see No. 56572.

80062. ACACIA MAIDENII F. Muell.

A tall evergreen shrub or tree up to 50 feet high, native to New South Wales, with lanceolate-falcate phyllodes 4 to 6 inches long, axillary spikes an inch long of bright-yellow flowers followed by narrow twisted pods.

80063. ACACIA RUPICOLA F. Muell.

A glabrous evergreen shrub usually about 5 feet high, native to Victoria and South Australia, with angular branchlets, rigid linear sharp-pointed phyllodes half an inch long, and yellow flowers in small globular heads.

80064. ACACIA SALICINA Lindl. (*A. ligulata* A. Cunn.).

A tall shrub or small tree, native to Australia, with pendulous branches and willowlike phyllodes up to 5 inches long. The yellow flowers are in short racemes of two or three globular heads.

For previous introduction see No. 75606.

80065. CALLICOMA SERRATIFOLIA Andrews. Cunoniaceae.

A tall evergreen shrub or tree up to 40 feet high, native to New South Wales and Queensland, with opposite coarsely serrate leaves 4 inches long, white or rusty underneath, and dense globular heads of small yellowish flowers in terminal panicles.

For previous introduction see No. 76933.

80066. EUCALYPTUS CORYMBOSA J. E. Smith (*E. gummifera* Hort.). Myrtaceae.

A medium-sized evergreen tree native to Australia, with leathery lanceolate leaves and large corymbs of fragrant yellowish white flowers.

For previous introduction see No. 75621.

80067. EUCALYPTUS SIDEROPHLOIA Benth. Myrtaceae. **Broadleaf ironbark.**

A tall evergreen tree, native to Queensland and New South Wales, with hard persistent rough bark, thick lanceolate-falcate leaves 3 to 6 inches long, and terminal corymbose panicles of small white flowers followed by ovoid fruits one-fourth of an inch long. The heavy durable wood is used for wagon work, tool handles, and building purposes.

80068. GREVILLEA HILLIANA F. Muell. Proteaceae.

A large evergreen tree 60 feet or less high, native to Australia, with leaves varying from elliptical and entire, 6 to 8 inches long, to a foot long and deeply pinnatifid with five or seven lanceolate lobes. The small red flowers are in

80060 to 80074—Continued.

dense cylindrical racemes 4 to 8 inches long.

For previous introduction see No. 40044.

80069. HALFORDIA DRUPIFERA F. Muell. Rutaceae.

A small evergreen tree, native to Australia, with angular branchlets, lanceolate leaves 3 to 5 inches long, and terminal paniculate clusters of small white flowers followed by purple ovoid drupes about half an inch long.

80070. KENNEDIA RUBICUNDA (Schneev.) Vent. Fabaceae.

A climbing evergreen leguminous shrub with dark-green leaves and large attractive dark-red flowers. Of possible value as a forage plant and for green manure.

80071. LOMATIA FRAXINIFOLIA F. Muell. Proteaceae.

A tall evergreen shrub or small tree, native to Queensland, with pinnate leaves made up of three to seven coriaceous ovate coarsely toothed leaflets 2 to 4 inches long, and small creamy white flowers in racemes 6 to 8 inches long or gathered together to form a large terminal panicle.

80072. SWAINSONA GALEGIFOLIA (Andrews) R. Br. (*S. coronillifolia* Salisb.). Fabaceae. **Darling pea.**

A low shrubby perennial, native to Australia, with compound vetchlike leaves and scarlet-orange flowers borne on long axillary stems. Reported to be poisonous to livestock.

For previous introduction see No. 77447.

80073. SYNCARPIA GLOMULIFERA (J. E. Smith) Niedenzu. Myrtaceae.

A tall slender evergreen tree, native to Australia, with broadly ovate leaves 2 to 3 inches long, appearing as if in whorls from two pairs being close together. The small white flowers are in globular clusters of 6 to 10 on short peduncles at the base of the new shoots. The wood is valuable for posts and other underground construction work.

For previous introduction see No. 75572.

80074. TRICONDYLUS MYRICOIDES (Gaertn. f.) Kuntze (*Lomatia longifolia* R. Br.). Proteaceae.

An evergreen shrub 8 to 10 feet high, native to New South Wales and Victoria, with very narrow lance-shaped leaves, and terminal or axillary racemes of creamy white flowers. The fruit is an oval-oblong follicle, and the seeds are winged. The wood is light colored and very hard, with a beautiful small figure, well suited for turnery.

For previous introduction see No. 43580.

80075. CHAYOTA EDULIS Jacq. (*Sechium edule* Swartz.). Cucurbitaceae. **Chayote.**

From Guatemala. Fruit presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received November 26, 1928. Numbered in April, 1929.

No. 1. A large green variety.

80076 to 80088.

From Darjiling, India. Seeds presented by J. E. Leslie, Curator, Lloyd Botanic Garden. Received April 17, 1929.

80076 to 80078. BERBERIS spp. Berberidaceae. **Barberry.**

80076. BERBERIS INSIGNIS Hook. f. and Thoms.

A beautiful bush of erect habit, with very few spines and large, shining hollylike evergreen leaves 3 to 7 inches long. The golden-yellow flowers are borne in clusters of about 15 and are followed by ovoid black berries. It is native to the eastern Himalayas.

For previous introduction see No. 60637.

80077. BERBERIS UMBELLATA Wall.

A hardy half-evergreen shrub, native to the Himalayas, about 3 feet high, with reddish brown grooved branchlets, obovate leaves an inch long, and umbellike racemes of yellow flowers which are followed by red berries.

For previous introduction see No. 78918.

80078. BERBERIS WALLICHIANA DC.

A narrow-leaved, evergreen barberry from temperate regions in the Himalayas, where it ascends to about 10,000 feet. The shining black-purple berries are produced in dense clusters.

For previous introduction see No. 65756.

80079. ERIOBOTRYA HOOKERIANA Decaisne. Malaceae.

A small stout-branched tree native to the eastern Himalayas at altitudes of 6,500 to 8,000 feet. It has thick leathery oblong sharply toothed leaves up to a foot long, large panicles of small white flowers, and egg-shaped yellow fruits about three-fourths of an inch long.

For previous introduction see No. 65252.

80080 to 80082. FICUS spp. Moraceae. **Fig.**

80080. FICUS BENJAMINA L. **Benjamin fig.**

A large tree, up to 80 feet high, native to India, with thin coriaceous ovate leaves 3 inches long and axillary pairs of small globose blood-red fruits.

For previous introduction see No. 67701.

80081. FICUS HISPIDA L. f.

A shrub or small tree up to 30 feet high, native to southeastern Asia, with hairy branches, ovate to obovate obscurely toothed leaves 8 inches long, and turbinate green fruits, nearly an inch in diameter, produced in fascicles on the old wood.

For previous introduction see No. 54892.

80082. FICUS HOOKERI Miquel.

A subtropical tree native to the temperate Himalayas of northeastern India. The oval leaves are up to 11 inches in length.

For previous introduction see No. 68336.

80076 to 80088—Continued.

80083. ILEX INSIGNIS Hook. f. Aquifoliaceae. **Holly.**

An attractive holly native to the Sikkim Himalayas, where it grows at an altitude of 7,000 feet. It forms a small tree or shrub with thick, grooved branches which are purplish when young. The dark-green leathery leaves are pinnately lobed, with the lobes spine tipped and alternately raised and depressed, so that there appears to be a double row of spiny lobes on each side. This holly has proved hardy in Ireland and may be suited for growing in the Gulf States and southern California.

For previous introduction see No. 65256.

80084. IRIS CLARKEI Baker. Iridaceae. **Clarke iris.**

A curiously local iris native to the Himalayas in a circumscribed area in the Sikkim and Bhutan region at altitudes between 6,000 and 11,000 feet, in ground that is swampy half the year and frozen hard under snow during most of the remaining months. The narrow leaves, 2 feet long, droop at the tips; the upper surface is polished and shiny, the under side glaucescent. The solid stem is 2 feet long, and bears one or two lateral heads. The falls are blue-purple, blotched with white, and are reflexed laterally. The upper part of the haft is marked with yellow. The reddish purple, lanceolate standards are poised almost horizontally. The styles form the highest point of the flowers; they are keeled, very convex, and 1½ inches long.

For previous introduction see No. 76251.

80085. MEIBOMIA TILIAEFOLIA (D. Don) Kuntze (*Desmodium tiliaefolium* Don). Fabaceae.

A large deciduous shrub native to the Himalayas at altitudes ranging from 3,000 to 9,000 feet. It has slender terete branches, thick green trifoliolate leaves about 4 inches long, and red flowers in lax racemes often a foot long. The bark yields an excellent fiber extensively employed in rope making; the leaves are good fodder; and the roots are used medicinally as a tonic and diuretic.

For previous introduction see No. 47726.

80086. MELOTHRIA ODORATA Hook. f. and Thoms. Cucurbitaceae.

A climbing herbaceous plant, native to the northwestern Himalayas at an altitude of 7,000 feet, with more or less heart-shaped leaves, white axillary flowers, and white indehiscent fruits.

For previous introduction see No. 47729.

80087. STYRAX HOOKERI C. B. Clarke. Styracaceae. **Snowbell.**

A tree often 40 feet high, native to Sikkim and Bhutan at altitudes ranging from 6,000 to 7,000 feet. The white flowers, an inch long, are tomentose outside, and the young branches are stellately pubescent. The wood is white, close-grained, and moderately hard.

For previous introduction see No. 60656.

80076 to 80088—Continued.

80088. TSUGA DUMOSA (D. Don) Eichler (*T. brunoniana* Carr.). Pinaceae. **Hemlock.**

A tall evergreen tree, sometimes 120 feet high, native to northeastern India, but said to be not quite hardy in England. It has spreading branches and pendulous branchlets. The wood is soft and white, and the bark is used for roofing.

For previous introduction see No. 47819.

80089. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From China. Seeds obtained through Guy M. Walker, Laurel, Miss. Received May 9, 1929.

From the Imperial Peach Orchards. The fruits are pale green when ripe, with none of the blush or yellow that is peculiar to other peaches; the flavor is delicious.

80090 and 80091.

From Lavras, Minas Geraes, Brazil. Seeds presented by B. H. Hunnicutt, Instituto Gammon. Received May 10, 1929.

80090. DOLICHOLUS PHASEOLOIDES (Swartz) Kuntze (*Rhynchosia phaseoloides* DC.). Fabaceae. **Rosarybean.**

A slender climber with trifoliolate leaves, borne upon slender wiry stems, which suggest those of the common bean (Phaseolus). The plant is of interest chiefly for the small, bright-red seeds with a black eye which are strikingly similar to those of *Abrus precatorius*, the *crab's eye* of the West Indies.

For previous introduction see No. 51027.

80091. ORMOSIA MONOSPERMA (Swartz) Urban. Fabaceae. **Necklacetree.**

The necklacetree is so called because its beans are the size of large beads, three-fourths of an inch long, and of a brilliant scarlet blotched with the deepest brown. The tree comes from tropical South America and fruits during the winter months.

For previous introduction see No. 79542.

80092. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Mayaguez, Porto Rico. Cuttings presented by Robert L. Davis, Agronomist of the Porto Rico Agricultural Experiment Station. Received May 15, 1929.

Mayaguez 51.

80093. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Kief, Ukraine, Union of Socialistic Soviet Republics. Seeds presented by A. Kol, Chief of the Bureau of Introduction, Institute of Applied Botany, Leningrad. Received May 18, 1929.

No. 93776. An early-maturing variety from the Kief Experiment Station.

80094. CHAYOTA EDULIS Jacq. (*Sechium edule* Swartz). Cucurbitaceae. **Chayote.**

From Guatemala. Fruits presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received November 26, 1928. Numbered in April, 1929.

No. 2. A medium-sized green variety.

80095. ILEX PURPUREA Hassk. Aquifoliaceae.

Plants growing at the Barbour Lathrop Plant Introduction Garden, Savannah, Ga. Numbered in June, 1929.

A handsome evergreen tree or large shrub native to Japan and central China. The leaves are dark green, glabrous, elliptic-ovate to oblong-lanceolate, crenate-serrulate, and 2 to 3 inches long. In Savannah, Ga., the new leaves appear in late March or early April and the flowers a month later. The red fruits are about one-third of an inch in diameter and are in clusters of two to five on a short peduncle.

80096. PINUS ARMANDI Franch. Pinaceae. **Armand pine.**

From China. Seeds collected by J. F. Rock, National Geographic Society, Washington, D. C. Received April 29, 1929.

A tree 70 to 90 feet high with a trunk 4 feet in diameter, which grows in western China on well-drained, moist mountain slopes at altitudes of 8,000 to 10,000 feet. The edible seeds are sold in the markets.

For previous introduction see No. 58538.

80097 to 80099. CHAYOTA EDULIS Jacq. (*Sechium edule* Swartz). Cucurbitaceae. **Chayote.**

From Guatemala. Fruits presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received November 26, 1928. Numbered in April, 1929.

80097. No. 5. A medium-sized yellowish green variety which is very spiny.

80098. No. 6. A large white spiny variety.

80099. No. 7. A large yellowish green variety which is very spiny.

80100. POLYMNIA EDULIS Wedd. Asteraceae.

From Paris, France. Roots presented by Dr. M. Lemoine. Received April 2, 1929.

A sunflowerlike plant, native to the Andes near Bogota, Colombia, with tall stems, large leaves which are eaten by cattle, and yellow flowers. The edible tubers are white, almost transparent, and very sweet.

80101. ESCALLONIA sp. Escalloniaceae.

From Glasnevin, Dublin, Ireland. Plants presented by J. W. Besant, Botanic Gardens, Department of Agriculture. Received April 5, 1929.

C. F. Ball. A red-flowered hybrid made by C. F. Ball at the Botanic Gardens, Glasnevin. It is believed to be a cross between *Escallonia rubra* and *E. macrantha.*

80102. ASTRAGALUS sp. Fabaceae. **Milkvetch.**

From Germany. Seeds presented by Carl Froitzheim, Callahan, Fla. Received April 2, 1929.

A plant which grows in the woods near the Rhine River in Germany. It resembles clover when in bloom, but the leaves are more like vetch. The stems are 2 to 3 feet long, with more than 20 on a plant.

80103. PINUS MERKUSII Jungh. and De Vr. Pinaceae. **Pine.**

From Baleg, Sumatra. Seeds presented by A. Bircher, Middle Egypt Botanic Station, El Saff, Egypt. Received April 2, 1929.

A giant pine which covers a vast area of the poor volcanic soil in northern Sumatra. It grows to a height of 240 feet, is 4 feet in diameter, and yields a superior grade of turpentine and resin.

For previous introduction see No. 67588.

80104. TIGRIDIA PAVONIA (L. f.) Ker. Iridaceae. **Common tigerflower.**

From Newry, Ireland. Bulbs purchased from T. Smith, Daisy Hill Nursery. Received April 5, 1929.

Variety *alba immaculata.* A form with pure white flowers.

80105. CLEMATIS ARMANDI Franch. Ranunculaceae. **Armand clematis.**

From Exeter, England. Plants purchased from Robert Veitch & Son, The Royal Nurseries. Received April 4, 1929.

A tender woody Chinese evergreen vine with lustrous coriaceous trifoliolate leaves with entire lanceolate leaflets, panicles of white flowers 2 inches across, and fruits with long plumose styles.

For previous introduction see No. 76013.

80106. PINUS NIGRA MAURITANICA Maire and Peyer. Pinaceae. **Pine.**

From Algiers, Algeria, Africa. Seeds presented by Dr. R. Maire, Jardin Botanique, Université d'Alger. Received April 3, 1929.

A variety of the Austrian pine distinguished by its smaller size, smaller cones, and longer leaves. It is native to Morocco south of Djuradjura.

80107. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Rio Piedras, Porto Rico. Plants presented by R. Fernandez Garcia, Director of the Insular Experiment Station of the Department of Agriculture and Labor. Received April 10, 1929.

D–625.

80108 to 80116. FRAGARIA spp. Rosaceae. **Strawberry.**

From Breda, Netherlands. Plants presented by Dr. I. Rietsema. Received April 8, 1929.

80108. FRAGARIA sp.

Deutsch Evern.

80109. FRAGARIA sp.

Jucunda.

80108 to 80116—Continued.

80110. FRAGARIA sp.

Laxton Noble.

80111. FRAGARIA sp.

Madame Kooy.

80112. FRAGARIA sp.

Mandan Lefeber.

80113. FRAGARIA sp.

Oberschlesien.

80114. FRAGARIA sp.

Scarlet.

80115. FRAGARIA sp.

Sieger.

80116. FRAGARIA sp.

Sweet French.

80117. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Tarnab, Peshawar, Northwest Frontier Province, India. Seeds presented by A. M. Mustafa, Agricultural Officer, Northwest Frontier Province, through Renwick S. McNiece, American Consul, Karachi. Received April 10, 1929.

A variety, locally developed, of unusual merit.

80118. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

From Japan. Seeds obtained through W. T. Swingle, Bureau of Plant Industry. Received April 10, 1929.

The so-called *Yamagaki*, which is probably a semiwild form of the cultivated Kaki persimmon (*Diospyros kaki*). It is widely used in Japan as a stock for the cultivated varieties of the Kaki persimmon. When Doctor Swingle was in Japan he was assured repeatedly that this is the best stock for persimmons, and for some varieties it is the only one that can be used successfully.

80119 and 80120.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received April 2, 1929.

80119. CLEMATIS GOURIANA Roxb. Ranunculaceae.

Baklo. A tall-climbing Himalayan drought-resistant vine with pinnate leaves of five to seven ovate papery leaflets 4 inches long and yellowish white flowers an inch across in large panicles.

For previous introduction see No. 68332.

80120. FLACOURTIA RUKAM Zoll. and Mor. Flacourtiaceae.

A handsome unarmed Malayan drought-resistant tree with leathery leaves and edible berries about the size of cherries, which are said to make excellent preserves.

80121. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

From Leningrad, Union of Socialistic Soviet Republics. Seeds presented by A. Kol, Chief of the Bureau of Introduction, Institute of Applied Botany, through H. V. Harlan, Bureau of Plant Industry. Received April 15, 1929.

80121—Continued.

No. 1716. July 7, 1927. Variety *Dundar beyi.* This variety was collected by Doctor Zhukovsky while on an expedition to Asia Minor, 1925 to 1927.

80122. MEROPE ANGULATA (Willd.) Swingle (*Citrus angulata* Willd.) Rutaceae. **Kigerukkan.**

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Botanic Gardens, through W. T. Swingle, Bureau of Plant Industry. Received April 15, 1929.

A small spiny tree native to tidal swamps in southern Java. The thick leathery simple leaves are alternate, and the small white flowers are in axillary pairs. The fruits are 1 to 2 inches long and are triangular in cross section, about an inch on each side. Of possible value as a stock for citrus fruits.

For previous introduction see No. 41452.

80123 to 80125. VITIS spp. Vitaceae. **Grape.**

From Wiener Neustadt, Austria. Cuttings presented by Kober, Kohlfürst & Gesellschaft. Received April 17, 1929.

80123. VITIS BERLANDIERI × RIPARIA.

Kober 5 BB.

80124 and 80125. VITIS RUPESTRIS Scheele. **Sand grape.**

80124. *Rupestris Goethe No. 9.*

80125. *Rupestris Schwarzmann.*

80126 to 80139.

From Palmero, Sicily. Plants purchased from Cav. Santarella, Direttore Della Societa di Acclimazione. Received April 6, 1929.

80126 and 80127. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

80126. *Prof. Vita.*

80127. *Cavaliera.*

80128 to 80134. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

80128. *Agostina.*

80129. *Carinese.*

80130. *Cotogna di S. Stefano.*

80131. *Fragolara.*

80132. *Sanguigna.*

80133. *Spaccarella di Sicilia.*

80134. *Do St. Anna.*

80135 to 80138. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

80135. *Di San Giulianao.*

80136. *A Mandorla dolce.*

80137. *Regina.*

80138. *Re Umberto.*

80139. PRUNUS CERASUS L. Amygdalaceae. **Sour cherry.**

Amarena comune.

80140 to 80143. FRAGARIA spp. Rosaceae. **Strawberry.**

From Histon, Cambridge, England. Plants obtained from Chivers & Sons, through G. M. Darrow, Bureau of Plant Industry. Received April 15, 1929.

80140. FRAGARIA sp.

Madame Koot.

80141. FRAGARIA sp.

Madame La Febera.

80142. FRAGARIA sp.

Paxton.

80143. FRAGARIA sp.

Royal Sovereign.

80144. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Trinidad, British West Indies. Cuttings presented by Dr. W. G. Freeman, Director of Agriculture. Received April 13, 1929.

D–625.

80145 and 80146. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

From Kenilworth, near Cape Town, Union of South Africa. Sod presented by Charles N. Murray. Received April 8, 1929.

80145. *Karroo.* A variety which derives its name from the district from which it comes. It is a finer variety than *Royal Cape Strain.*

80146. *Royal Cape Strain.* A coarse variety which has been the standard turf on greens since 1904 in Kenilworth. Its merits are that it is very hard, is drought resistant in a high degree, is never scorched by the hottest sun, stands unlimited wear, and gives a true putting surface which does not develop nap.

80147. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received April 18, 1929.

Seeds taken by Mr. Wester from the two best mandarin oranges ever eaten by him.

80148. SESBANIA CANNABINA (Retz.) Poir. Fabaceae.

From Peradeniya, Ceylon. Seeds purchased from the Manager of the Publication Depot and Central Seed Store of the Department of Agriculture. Received April 19, 1929.

A stout annual plant, native to Ceylon, with prickly branches, compound leaves a foot long made up of 40 to 80 linear leaflets, and subsessile racemes of 3 or 4 yellow flowers about a quarter of an inch long.

For previous introduction see No. 76103.

80149. PHYLLOSTACHYS sp. Poaceae. **Bamboo.**

From Avery Island, La. Plants presented by E. A. McIlhenny, at the request of R. A. Young, Bureau of Plant Industry. Received April 22, 1929.

80149—Continued.

This is said by Mr. McIlhenny in his letter dated November 19, 1929, to be one (which one is not known) of the two Chinese bamboos sent to him under F. P. I. Nos. 23242 and 23243 from Chico, Calif., April 3, 1914, by the Department of Agriculture. In 1929 one of the tallest culms at Avery Island was 21 feet high. The plants were in poor soil and have grown without attention, according to Mr. McIlhenny. They appear to belong unmistakably to Phyllostachys, though the sheaths of the young shoots are so different as at first to suggest the possibility of some other genus.

80150 to 80153. FICUS CARICA L. Moraceae. **Common fig.**

From Ariana, Tunis, Africa. Scions presented by F. Bœuf, Chef du Service Botanique. Received April 17, 1929.

80150. *Angel Djemel.*

80151. *Bayoudi.*

80152. *Bidhel atrous.*

80153. *Bidhel Djemmal.*

80154. PYRUS sp. Malaceae. **Pear.**

From Erfurt, Germany. Trees purchased from J. C. Schmidt. Received April 19, 1929.

Krebs Birne. A variety said to ripen in October and to have red flesh.

80155 to 80167. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From San Juan, Porto Rico. Seeds presented by O. W. Barrett, Agricultural Director, Department of Agriculture, through Roland McKee, Bureau of Plant Industry. Received April 17, 1929.

80155. *Cólmenos.*

80156. *New Era.*

80157. No. 8. *Venezuela.*

80158. No. 813. *Dominica.*

80159. No. 4427.

80160. No. 4445.

80161. No. 4464. *Cadios.*

80162. No. 4651. *Yaguis.*

80163. No. 4652.

80164. No. 4656.

80165. No. 4657.

80166. No. 4659.

80167. No. 4679.

80168. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Lamlash, Scotland. Tubers presented by Donald MacKelvie. Received April 22, 1929.

Arran Banner.

80169. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Santiago de las Vegas, Cuba. Cuttings presented by Dr. Gonzalo Fortún, Director de la Estación Experimental Agronómica. Received April 23, 1929.

D–625.

80170 to 80193.

From the British West Indies. Seeds collected by Allison V. Armour. Received April 10, 1929.

Unless otherwise stated, the following material is from the Trinidad Botanic Gardens.

80170. ACANTHORHIZA ACULEATA (Liebm.) Wendl. Phoenicaceae. **Rootspine palm.**

A palm, native to Mexico, with a trunk 30 to 40 feet high, armed at the base with spines formed of the thickened aerial roots. The orbicular fan-shaped leaves are about 5 feet in diameter on stalks 4 feet long; the flowers are dark creamy pink.

For previous introduction see No. 45906.

80171. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude (*Ptychosperma alexandrae* F. Muell.). Phoenicaceae. **Palm.**

A palm with a tall stout trunk up to 80 feet high and pinnately segmented leaves several feet long which are bright green above and whitish underneath. It is native to Australia.

For previous introduction see No. 40069.

80172. ARECA CATECHU L. Phoenicaceae. **Betel palm.**

A palm, native to tropical Asia, up to 100 feet high, with a large crown of pinnate leaves 4 to 6 feet long. The orange or scarlet ovoid fruits, 1 to 2 inches long, furnish the betel nuts which are so generally used in the Orient for chewing.

For previous introduction see No. 66201.

80173. ARTOCARPUS COMMUNIS Forst. Moraceae. **Breadnut.**

A tree, native to the East Indies, 30 to 40 feet high, with viscid milky juice and leathery ovate leaves 3 feet long, entire at the base but divided above into three to nine lobes. The large fruits, 4 to 6 inches in diameter, are often seedless, but in this variety the seeds are present and are much the size and flavor of chestnuts.

For previous introduction see No. 61269.

80174. ASSONIA MASTERSII (Hook.) Kuntze (*Dombeya mastersii* Hook.). Sterculiaceae.

St. Vincent Botanic Gardens. A shrub 4 to 5 feet high, with serrate heart-shaped velvety leaves and many-flowered umbels of fragrant white flowers. It is native to tropical Africa.

80175. ATTALEA SPECTABILIS Mart. Phoenicaceae. **Palm.**

A nearly stemless palm with large pinnate erect or spreading leaves up to 21 feet long. It is native to the banks of the Amazon in Brazil.

For previous introduction see No. 79560.

80176. BARRINGTONIA ASIATICA (L.) Kurz (*B. speciosa* Forst.). Lecythidaceae.

A large handsome tree, 50 feet high, with thick leathery bright-green leaves a foot long, racemes of large showy flowers having white petals, and crimson-tipped stamens resembling a brush. The smooth

80170 to 80193—Continued.

shining black fruits are shaped like a 4-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see No. 73226.

80177. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

A palm, native to tropical Africa, which is 60 to 70 feet high, with a crown of palmate leaves, 8 to 10 feet long and broader than long, divided to the middle into sword-shaped segments. The broadly ovoid orange-colored fruits are about half the size of a coconut.

For previous introduction see No. 78618.

80178. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Santo Domingo. A variety producing large, round to oblong fruits with a very fine flavor.

80179. CARYOTA MITIS Lour. Phoenicaceae. **Fishtail palm.**

St. Vincent Botanic Gardens. A palm, native to the Malay Peninsula, 15 to 25 feet high, which sends out suckers from the base. The pinnate leaves, 6 to 9 feet long, are divided into wedge-shaped segments, and the globular purple fruits are about the size of a cherry.

For previous introduction see No. 68111.

80180. DIALIUM GUINEENSE Willd. Caesalpiniaceae. **Velvet tamarind.**

St. Vincent Botanic Gardens. A tall pinnate-leaved tree, native to West Africa, with small, dark-brown, velvety edible fruits which are in large clusters. The fruits are about the size of small filberts, and the thin brittle shell incloses one or two seeds surrounded by a mildly acid farinaceous pulp, used in the preparation of pickles and in other ways. The timber is a handsome dark red.

For previous introduction see No. 73846.

80181. ELAEIS GUINEENSIS Jacq. Phoenicaceae. **African oil palm.**

A stout palm, native to tropical Africa, 20 to 30 feet high, with a deeply ringed trunk and a crown of pinnate leaves 10 to 15 feet long. The seeds are a source of oil, used not only in foods but also in making soaps.

80182. HYOPHORBE VERSCHAFFELTI Wendl. Phoenicaceae. **Spindle palm.**

A palm, native to the island of Mauritius, with a trunk up to 30 feet high, having a buige about half way up. The crown is made up of short-petioled pinnate leaves which have a yellow band extending from the leaf sheath to the tip of the blade.

80183. INODES BLACKBURNIANA (Glazebr.) O. F. Cook (*Sabal umbraculifera* Mart.). Phoenicaceae. **Blackburn palmetto.**

A palm, native to the West Indies, with a spineless trunk, between 30 and 40 feet high, which is thickened in the middle, large round fan-shaped leaves, and pear-shaped fruits an inch and a half long.

80170 to 80193—Continued.

For previous introduction see No. 62105.

80184. LAGERSTROEMIA SPECIOSA (Muench.) Pers. (*L. flos-reginae* Retz.). Lythraceae. **Queen crapemyrtle.**

Tobago Gardens. An ornamental tropical shrub or tree up to 50 feet high, native to West Africa, with panicles of large pink or purple flowers.

For previous introduction see No. 73736.

80185. LATANIA COMMERSONII Gmel. Phoenicaceae.

A tall spineless palm, native to the island of Mauritius, 30 to 40 feet high, with palmate leaves 5 to 6 feet long, having a red petiole and with the veins and margins tinged with red.

For previous introduction see No. 68118.

80186. LIVISTONA AUSTRALIS (R. Br.) Mart. Phoenicaceae. **Australian fan palm.**

A tall slender palm, native to Australia, 100 to 130 feet high and 12 to 18 inches in diameter, with a dense crown of circular leaves, 3 to 4 feet in diameter, divided nearly to the base into narrow plicate segments. The moderately hard light-colored wood is occasionally used for light construction; the leaves are used for baskets; and the unexpanded fronds, after being dipped in boiling water, are dried, shredded, and the fiber used in making hats resembling Panama hats.

For previous introduction see No. 77971.

80187. LIVISTONA CHINENSIS R. Br. Phoenicaceae. **Chinese fan palm.**

A palm, native to China, with a short thick trunk up to 6 feet high and a foot thick, having a crown of many reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch in length.

80188. MARTINEZIA CORALLINA Mart. Phoenicaceae. **Palm.**

A pinnate-leaved palm about 20 feet high, with a spiny stem and coral-red fruits. It is native to Martinique.

80189. PORTLANDIA GRANDIFLORA L. Rubiaceae.

A tropical shrub up to 15 feet high, native to the West Indies, with opposite elliptical leathery leaves and axillary fragrant white flowers which are funnelform and 5 inches long.

80190. PTYCHOSPERMA MACARTHURI Wendl. (*Kentia macarthuri* Hort.). Phoenicaceae. **MacArthur palm.**

A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation; it suckers from the base, making a bushy plant. The smooth ringed trunk is crowned by a dense cluster of pinnate leaves with arching leaflets 6 to 9 inches long.

For previous introduction see No. 77320.

80191. RHYTICOCOS AMARA (Jacq.) Beccari (*Cocos amara* Jacq.). Phoenicaceae. **Palm.**

80170 to 80193—Continued.

A palm, native to Martinique, with a ringed trunk reaching a height of 100 feet and bearing a crown of large pinnate leaves resembling those of the coconut.

For previous introduction see No. 62103.

80192. STYLOMA PACIFICA (Seem. and Wendl.) O. F. Cook. (*Pritchardia pacifica* Seem. and Wendl.). Phoenicaceae. **Fiji fan palm.**

A fan palm, native to the Fiji Islands, with a smooth straight trunk up to 30 feet high and a foot in diameter. The nearly circular leaves, 4 feet long by 3 feet wide, are on petioles 3 to 4 feet long and when young are densely covered with whitish brown tomentum, later becoming smooth and rich green.

80193. (Undetermined.)

From Tobago.

80194 to 80207.

From Leicester, England. Seeds purchased from Rev. J. Farnworth Anderson. Received April 4, 1929.

80194. CYTISUS PRAECOX Wheeler. Fabaceae. **Warminster broom.**

An ornamental shrub with silky hairy narrow leaves half an inch long and pale sulphur-yellow flowers produced in great abundance in early spring. It is a hybrid between *Cytisus purgans* and *C. multiflorus*, with the habit of the latter but more densely branching.

For previous introduction see No. 73541.

80195. GENTIANA BRACHYPHYLLA Vill. Gentianaceae. **Gentian.**

A high-alpine perennial which forms spreading tufts with small round leaves and brilliant blue flowers of the general type of *Gentiana verna;* appearing in late summer. Native to central Europe.

For previous introduction see No. 79068.

80196. NARCISSUS BULBOCODIUM CITRINUS Baker. Amaryllidaceae. **Petticoat daffodil.**

A small bulbous plant with very slender nearly terete leaves, and large pale lemon-yellow flowers, 1 to 2 inches long, with a large flaring, somewhat crenulate corona an inch across and inconspicuous perianth segments. The type is a native of the western Mediterranean countries.

80197. NARCISSUS CYCLAMINEUS Baker. Amaryllidaceae.

A dwarf daffodil with narrow drooping orange-yellow trumpet and entirely reflexed lemon-yellow perianth segments. It is native to Portugal.

For previous introduction see No. 76268.

80198. OMPHALODES VERNA Moench. Boraginaceae. **Venusbutton.**

A creeping perennial, native to Europe, with small ovate or sublanceolate leaves, acuminate and callose at the apex, and blue flowers in pairs in a raceme on an erect flower stem. It is related to the forget-me-not.

80199 to 80204. PEDICULARIS spp. Scrophulariaceae. **Woodbetony.**

80194 to 80207—Continued.

80199. PEDICULARIS GRACILIS Wall.

A herbaceous perennial alpine up to 2 feet high, with six slender opposite or whorled branches, whorled, deeply pinnatifid leaves up to 2 inches long, and rosy purple flowers in spikes or racemes 3 to 6 inches long. It is native to the temperate Himalayas.

80200. PEDICULARIS INTEGRIFOLIA Hook. f.

An alpine perennial, native to Sikkim, India, with a stout rootstock and ascending stems 4 to 6 inches high. The leaves are crowded, narrowly linear pubescent, and about 2 inches long. The dark-purple flowers are in oblong capitate spikes.

80201. PEDICULARIS MEGALANTHA Don.

A herbaceous perennial alpine, 1 to 2 feet high, with pinnately divided leaves and lax racemes of yellow or rose-purple flowers. It is native to the temperate Himalayas.

80202. PEDICULARIS ROYLEI Maxim.

A low cespitose perennial alpine, native to the Himalayas, with a thick root, small pinnately cut leaves, and purplish flowers in a small dense spike.

80203. PEDICULARIS SCHIZORRHYNCHA Prain.

A dwarf tufted alpine perennial with erect stems about 2 inches high, long-stemmed oblong-lanceolate pinnately divided leaves, and purple flowers, nearly half an inch long, in small head-like clusters. It is native to the eastern Himalayas.

80204. PEDICULARIS TRICHOGLOSSA Hook.

A stout perennial alpine up to 16 inches tall, with sessile linear-obtuse pinnatifid leaves about 2 inches long, and purple flowers in a lax spike. It is native to the Sikkim Himalayas.

80205. ROSCOEA HUMEANA W. W. Smith. Zinziberaceae.

A stout herbaceous perennial about 8 inches high, with sessile oval-lanceolate leaves 4 to 8 inches long and large hooded violet-purple flowers in compact spikes. It is native to southwestern China.

80206. SAXIFRAGA ALBERTI Regel and Schmalh. Saxifragaceae. **Saxifrage.**

A subshrubby perennial densely covered with oblong-ligulate leaves. The white flowers, with numerous red spots, are in small terminal racemes. Native to the mountains of Turkestan.

80207. TOFIELDIA CALYCULATA Wahlenb. Melanthiaceae.

An erect bulbous plant, a foot or less high, with upright, flat linear leaves terminating in a sharp point. These decrease in size up the stem, becoming nearly awnlike at the summit, and subtend the terminal spikelike raceme of yellowish-white flowers. Native to central Europe.

80208 to 80213. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Trinidad, British West Indies. Seeds presented by Dr. S. C. Harland, Cotton Research Station. Received April 5, 1929.

80208 to 80213—Continued.

80208. GOSSYPIUM CERNUUM Todaro.

An erect bush, 3 feet high, cultivated in India. The flowers are pale sulphur-yellow, and the petals are marked with a purple spot.

For previous introduction see No. 73990.

80209. GOSSYPIUM JAMAICENSE Macf.

Type 35. *Selfed.* A tropical shrub 4 to 5 feet high, with hairy branches, heart-shaped, 3-lobed hairy leaves, pale-yellow flowers, and a 4-valved capsule containing white cotton. It is native to Jamaica.

80210. GOSSYPIUM KIRKII Masters.

Tanganyika. A bushy, somewhat climbing plant from eastern tropical Africa which sometimes scrambles up between and among trees to a height of 14 feet. The leaves are palmately 5-lobed with a cordate base, the flowers are light yellow, and the oblong conical capsules are about a third of an inch long.

80211. GOSSYPIUM PURPURASCENS Poir.

Type 12. *Selfed.* A tropical American shrub, native to Trinidad, 6 to 10 feet high, with purplish branches, 3-lobed leaves, and sulphur-yellow flowers.

For previous introduction see No. 67526.

80212. GOSSYPIUM SCHOTTII Watt.

Cassava. Unselfed. A wild cotton native to Yucatan, Mexico, with leaves almost completely split up into three to five long linear lobes, and medium-sized flowers, yellow tinged with purple. The nearly globose capsules contain a scant amount of reddish fiber.

80213. GOSSYPIUM sp.

Kidney cotton.

80214. TURRAEA OBTUSIFOLIA Hochst. Meliaceae.

From Los Angeles, Calif. Seeds presented by P. D. Barnhart. Received April 10, 1929.

An attractive dwarf evergreen shrub 4 to 6 feet high, bearing between October and March an abundance of white flowers which have strap-shaped petals nearly 2 inches long. Native to South Africa.

For previous introduction see No. 34178.

80215 and 80216.

From Brignoles, France. Seeds presented by R. Salgues, Director, Salgues Museum of Brignoles. Received April 10, 1929.

80215. ORNITHOGALUM PYRENAICUM L. Liliaceae. **Star-of-Bethlehem.**

A bulbous plant, about 2 feet high, with narrow onionlike leaves and flowers on a simple leafless scape. It is native to Europe.

For previous introduction see No. 79177.

80216. VICIA NARBONENSIS L. Fabaceae. **Vetch.**

An annual legume, native to southern Europe, with angled stems 2 to 4 feet tall, compound leaves of two to three pairs of fleshy elliptic leaflets 1 to 2 inches long, and racemes of blue to purple flowers.

80217 to 80245. AVENA spp. Poaceae. **Oats.**

From New South Wales, Australia. Seeds presented by H. Wenholz, Director of Plant Breeding of the Department of Agriculture, Sydney. Received April 20, 1929.

80217 to 80219. AVENA BYZANTINA Koch.

80217. *Algerian.* 1928 crop from Glen Innes.

80218. *Algerian.* 1929 crop from Glen Innes.

80219. *Burt.* 1928 crop from Glen Innes.

80220. AVENA SATIVA L.

Kherson. 1928 crop from Glen Innes.

80221 to 80245. AVENA spp.

1928 crop from Glen Innes.

80221. AVENA sp.

No. 749.

80222. AVENA sp.

Amery.

80223. AVENA sp.

Asquith.

80224. AVENA sp.

Baldwin.

80225. AVENA sp.

Baxter.

80226. AVENA sp.

Belar.

80227. AVENA sp.

Beta.

80228. AVENA sp.

Birdwood.

80229. AVENA sp.

Bond.

80230. AVENA sp.

Boppy.

80231. AVENA sp.

Boree.

80232. AVENA sp.

Brundah.

80233. AVENA sp.

Buddah.

80234. AVENA sp.

Budgery.

80235. AVENA sp.

Byng.

80236. AVENA sp.

Guyra.

80237. AVENA sp.

Kanata.

80238. AVENA sp.

Kandas.

80239. AVENA sp.

Kurri.

80240. AVENA sp.

Reid.

80217 to 80245—Continued.

80241. AVENA sp.

Rucklands.

80242. AVENA sp.

Sunrise.

80243. AVENA sp.

Westdale.

80244. AVENA sp.

Weston.

80245. AVENA sp.

Woodford.

80246 to 80248. TIGRIDIA PAVONIA (L. f.) Ker. Iridaceae. **Common tigerflower.**

From Sassenheim, Netherlands. Bulbs purchased from Van Zonneveld Bros. & Philippi. Received April 24, 1929.

80246. Variety *canariensis.* Pale-yellow flowers with red-spotted centers.

80247. Variety *lutea immaculata.* Pure-yellow spotless flowers.

80248. Variety *rosea.* Rose-colored flowers with yellow-variegated centers.

80249. CROTON sp. Euphorbiaceae.

From Njalá, Sierra Leone, Africa. Seeds presented by the Provincial Superintendent of Agriculture, of the Njala Experiment Farm. Received April 25, 1929.

A euphorbiaceous tree growing on the river bank at Njala.

80250. NICOTIANA TABACUM L. Solanaceae. **Common tobacco.**

From Mexico. Seeds obtained through Leonard G. Dawson, American Consul. Received April 25, 1929.

A special variety said to be from the best tobacco grown in the vicinity of San Andres Tuxtla, about 80 miles southwest of Vera Cruz.

80251. ERYTHRINA ACANTHOCARPA E. Mey. Fabaceae.

From Pretoria, Union of South Africa. Seeds presented by E. Percy Phillips, Chief of the Division of Botany, Horticulture, and Entomology of the Department of Agriculture. Received April 26, 1929.

A rigid wide-branched shrub, native to South Africa, 4 to 6 feet high, armed with sharp awl-shaped reflexed prickles. The leaves are made up of three elliptical leaflets one-half to 1 inch long and 1 to 2 inches broad; the scarlet flowers, 1 to 2 inches long, are in lateral and terminal racemes and are followed by twisted prickly pods.

80252. GRAMMATOPHYLLUM SPECIOSUM Blume. Orchidaceae. **Orchid.**

From Medan, Sumatra. Seeds presented by Dr. J. A. Lörzing. Received April 27, 1929.

A giant orchid with stout stems 6 to 10 feet long, strap-shaped leaves a foot or two in length, and flower clusters 6 feet long. The numerous flowers are 6 inches in diameter and are yellow blotched with deep purple. Native to the East Indies.

For previous introduction see No. 67181.

80253 to 80260. CITRUS NOBILIS UNSHIU Swingle. Rutaceae. **Satsuma orange.**

From Okitsu, Japan. Plants presented by Dr. K. Nagai, Imperial Experiment Station. Received April 27, 1929.

80253. *Ikeda (Unshio) wasi.*

80254. *Ishihawa wasi.*

80255. *Miyakawa wasi.*

80256. *Sato Dai wasi.*

80257. *Takahashi wasi.*

80258. *Tsuda wasi.*

80259. *Yamamota wasi.*

80260. *Yanagisawa wasi.*

80261 to 80266. PRUNUS spp. Amygdalaceae.

From Saonara, Padua, Italy. Trees purchased from Fratelli Sgaravatti. Received April 24, 1929.

80261 and 80262. PRUNUS AVIUM L. **Sweet cherry.**

80261. *Napoleone (Imbrian).* Large brilliant-red fruits, produced during June and July, with very delicious white flesh.

80262. *Regina del mercato.* Large, heart-shaped, carmine-red fruits produced during June. The flesh is juicy and very sweet.

80263 to 80266. PRUNUS CERASUS MARASCA (Host) C. Schneid. **Maraschino cherry.**

80263. *Del Nord (Marasca tedesca).* Medium-sized, juicy, somewhat acid fruits which change from red to purple. They are produced during June.

80264. *Imperiale.* Large, intense red fruits produced during June and July. The flesh is tender and sweet to subacid.

80265. *Marasca di Ostheim.* Medium-sized, pale-red fruits produced during June.

80266. *Marasca olandese.* Large black fruits.

80267. KOKIA DRYNARIOIDES (Seem.) Lewton. Malvaceae.

From Honolulu, Hawaii. Seeds presented by H. L. Lyon, in charge of the Department of Botany and Forestry of the Experiment Station of the Hawaii Sugar Planters' Association. Received April 30, 1929.

These seeds were gathered from the only known living tree, which is located on the island of Molokai. An ornamental tree with long-stemmed, heart-shaped leaves and red, silky flowers, it is native to the Hawaiian Islands, but now has become practically extinct because of the ravages of cattle, sheep, and goats that eat the bark and leaves.

For previous introduction see No. 58574.

80268 to 80292.

From Ottawa, Canada. Seeds presented by J. Adams, Botanist, Central Experimental Farm. Received April 6, 1929.

80268. ACER MYABEI Maxim. Aceraceae. **Maple.**

No. 129. A deciduous tree, native to Japan, 30 to 40 feet high, with a trunk 1½ feet in diameter, deeply 3-lobed leaves, downy yellow flowers in corymbs 2 to 3 inches long, and keys up to an inch long.

For previous introduction see No. 75665.

80269. BETULA TURKESTANICA FETISOWI Hort. Betulaceae. **Birch.**

No. 191. A hardy birch from Central Asia.

80270. CARAGANA PYGMAEA (L.) DC. Fabaceae. **Dwarf pea-tree.**

No. 717. A shrub, native to Siberia, prostrate or up to 3 feet high, with spreading branches, spiny stipules, compound leaves of four linear-lanceolate spine-tipped leaflets, and solitary yellow flowers an inch long.

For previous introduction see No. 64768.

80271 to 80286. GENTIANA spp. Gentianaceae. **Gentian.**

80271. GENTIANA ASCLEPIADEA L. **Milkweed gentian.**

No. 621. A comparatively robust subalpine species forming clumps of vigorous stems up to 3 feet high with opposite oval-pointed leaves. In late summer it produces, from the upper axils, almost sessile trumpet-shaped sapphire-blue flowers which weigh down the arching stalks. There is some variation in color from seed, which germinates freely and produces flowering plants in about three years. The plant is said to be indifferent as to whether the soil is alkaline or not.

For previous introduction see No. 79160.

80272. GENTIANA BAICALIENSIS Hort.

No. 622.

80273. GENTIANA BURSERI Lapeyr.

No. 623. A low alpine perennial native to the Pyrenees, with an unbranched stem less than a foot high, oval-elliptic leaves, and yellowish flowers with the corollas mostly 6-cut.

For previous introduction see No. 79230.

80274. GENTIANA FETISOWII Regel and Winkler.

No. 628. A small-flowered rather coarse species blooming in late summer. It is native to Siberia.

For previous introduction see No. 79024.

80275. GENTIANA FREYNIANA Borum.

No. 629. A herbaceous perennial 6 inches high, native to Asia Minor, related to *Gentiana septemfida,* with lanceolate leaves and headlike cymes of dark-blue flowers which are borne during late summer.

For previous introduction see No. 79075.

80276. GENTIANA GROMBEZEWSKII Hort.

No. 630. A place of publication or description for this name has not been found.

For previous introduction see No. 79027.

80268 to 80292—Continued.

80277. GENTIANA KURROO Royle.

No. 631. A gentian, native to the Himalayas, forming dense tufts from which rise lax stems up to 7 inches high with narrow lanceolate leaves and bell-shaped blue flowers spotted white inside. It is said to appreciate a sunny location, with ample moisture and perfect drainage, especially in spring and autumn.

For previous introduction see No. 79078.

80278. GENTIANA MACROPHYLLA Pall.

No. 632. A herbaceous perennial, native to northern Europe and Asia, with an erect or ascending stem, narrow spreading leaves, and clustered heads of dark-blue flowers.

For previous introduction see No. 79080.

80279. GENTIANA OLIVIERI Griseb.

No. 633. A herbaceous perennial, native to mountain pastures in the Himalayas, about 9 inches high, with dark-blue flowers in umbellike cymes.

For previous introduction see No. 79258.

80280. GENTIANA PANNONICA Scop.

No. 634. A tall stout perennial, native to Europe, with broadly elliptical to narrowly ovate leaves, and flowers which are purple above.

For previous introduction see No. 79259.

80281. GENTIANA PHLOGIFOLIA Schott and Kotschy.

No. 635. A creeping alpine species, native to central Europe, about 10 inches high, with clustered dark-blue flowers which are borne in early summer.

For previous introduction see No. 79083.

80282. GENTIANA PRZEWALSKII Maxim.

No. 636. A lax-growing free-flowering gentian native to western China, rather like *Gentiana kurroo*, with linear leaves about 6 inches long and flowers with nearly white tubes and cobalt-blue petals.

For previous introduction see No. 79086.

80283. GENTIANA SAPONARIA L.

No. 637. A hardy herbaceous perennial not exceeding 2 feet in height, with an ascending stem, narrow pointed opposite leaves, and light-blue flowers. It is native to eastern North America.

For previous introduction see No. 78935.

80284. GENTIANA SEPTEMFIDA Pall.

No. 639. A gentian, native to Asia, which resembles *Gentiana asclepiadea*, requiring similar conditions. It makes spreading clumps up to 12 inches high with opposite ovate leaves and heads of wide-mouthed trumpet-shaped blue flowers in late summer. It varies considerably in habit and flower color, but all forms do well in peaty loam with ample but not stagnant water supply.

For previous introduction see No. 79091.

80268 to 80292—Continued.

80285. GENTIANA TIBETICA King. **Himalayan gentian.**

No. 642. An erect plant 1½ feet high, with oblong-ovate leaves 5 to 7 inches long and small dull yellowish white axillary flowers an inch long. It is native to Tibet.

For previous introduction see No. 79028.

80286. GENTIANA WALUJEWI Regel and Schmalh.

No. 643. A dwarf gentian, native to Sinkiang, China, bearing white flowers with blue spots.

For previous introduction see No. 79095.

80287. LIGUSTRUM sp. Oleaceae. **Privet.**

No. 801. The privets are deciduous or evergreen shrubs with opposite entire leaves and terminal panicles of small white flowers.

80288 to 80291. ROSA spp. Rosaceae.

80288. ROSA RUBRIFOLIA Vill. **Redleaf rose.**

No. 1231. Variety *lívida*. A shrub 6 feet high, native to southern Europe, with five to seven oblong leaflets which are simply toothed. The bright-red flowers are borne in small clusters, and the small globose fruits are red and pulpy. The whole plant is glaucous and tinged with bluish red.

For previous introduction see No. 54228.

80289. ROSA SPINOSISSIMA L. **Scotch rose.**

No. 1234. A low shrub usually 3 to 4 feet high, with spreading or recurving branches and densely prickly branchlets. It is native to Europe. The compound leaves are made up of 5 to 11 nearly orbicular serrate leaflets about an inch long, and the pink, white, or yellow flowers 2 inches across are solitary but borne on numerous short branchlets along the stems.

For previous introduction see No. 54235.

80290. ROSA SPINOSISSIMA ALTAICA (Willd.) Rehd. **Altai rose.**

No. 1235. A more vigorous and less bristly form of the Scotch rose with large white flowers.

For previous introduction see No. 54236.

80291. ROSA SPINOSISSIMA HISPIDA (Sims) Koehne. **Bristly Scotch rose.**

No. 1236. An upright bristly form of the Scotch rose usually 6 or more feet high, with large sulphur-yellow flowers.

For previous introduction see No. 54237.

80292. SYRINGA sp. Oleaceae. **Lilac.**

No. 812. The lilacs are ornamental shrubs or small trees with opposite, usually entire leaves and large showy panicles of usually fragrant salver-shaped flowers.

80293. TRIFOLIUM RESUPINATUM L. Fabaceae. **Strawberry clover.**

From Teheran, Persia. Seeds obtained from Jalil K. Hashimzade, Ministry of Public Works, Department of Roads, through Augustin Ferrin, American Consul, Teheran. Received April 30, 1929.

Shaftal clover.

For previous introduction see No. 67863.

80294 to 80303.

From Haifa, Palestine. Cuttings presented by Amram Khazanoff, The Palestine Jewish Colonization Association. Received April 15, 1929.

80294 to 80299. FICUS CARICA L. Moraceae. **Common fig.**

80294. *Baidi.*

80295. *Kharoobi.*

80296. *Khedari.*

80297. *Khurtmani.*

80298. *Mozi.*

80299. *Sultani.*

80300 to 80303. VITIS VINIFERA L. Vitaceae. **European grape.**

80300. *Baidi.*

80301. *Helwani.*

80302. *Jemdani.*

80303. *Khedari.*

80304 to 80307. RHODODENDRON spp. Ericaceae.

From Leicester, England. Seeds purchased from Rev. J. Farnworth Anderson. Received April 13, 1929.

80304. RHODODENDRON ALBRECHTII Maxim. **Azalea.**

A deciduous shrub, native to Japan, 3 to 5 feet high, with purple-brown branchlets, obovate leaves 2 to 6 inches long in clusters of about five at the end of the twigs, and clusters of three to five rotate-campanulate magenta flowers about 2 inches across. It is a handsome shrub resembling *Rhododendron slippenbachii*, but less showy; the leaves turn yellow in the autumn.

80305. RHODODENDRON DECORUM Franch.

An evergreen shrub, native to western China, with oblong leaves 3 to 5 inches long, glaucous beneath, and racemose clusters of green-spotted white or pink flowers 2 inches across.

For previous introduction see No. 79041.

80306. RHODODENDRON MARIESII Hemsl. and Wils. **Azalea.**

A deciduous shrub up to 8 feet high, native to central China, and related to *Rhododendron rhombicum*. The ovate leaves, 2 to 3 inches long, are silky pubescent on the midrib beneath, and the one to three rose-pink broadly campanulate flowers are 1 to 2 inches across.

80307. RHODODENDRON TSCHONOSKII Maxim. **Azalea.**

A forest shrub, native to Japan, with flaky bark, elliptic leaves one-third of an inch long, and heads of one to four small white flowers.

For previous introduction see No. 79043.

80308 to 80339.

From Woodbridge, Suffolk, England. Plants purchased from R. C. Notcutt. Received April 11, 1929.

80308 to 80327. CYTISUS spp. Fabaceae. **Broom.**

80308. CYTISUS ALBUS Hacquet. **Pale broom.**

An upright shrub about 3 feet high, with villous branches, leaves of three oblong-ovate leaflets less than an inch long, and clusters of three to six yellowish white flowers. It is native to southeastern Europe.

80309. CYTISUS AUSTRIACUS L.

A dwarf shrub about 3 feet high, native to southeastern Europe, with trifoliolate silky pubescent leaves and headlike clusters of bright-yellow flowers.

For previous introduction see No. 76241.

80310 and 80311. CYTISUS BIFLORUS L'Her.

80310. A leguminous shrub 3 feet high, with slender branches, leaflets with silky lower surfaces, and yellow flowers, single or in pairs, which are borne during the spring [May].

For previous introduction see No. 73536.

80311. Variety *versicolor prostrata*. A shrub of strong spreading growth. The flowers are golden yellow in the bud, opening to fawn.

80312. CYTISUS DALLIMOREI Rolfe.

This slender shrub, which is a garden hybrid, is of moderate growth, with trifoliolate leaves and axillary and terminal clusters of reddish purple velvety flowers.

For previous introduction see No. 76343.

80313. CYTISUS DECUMBENS (Willd.) Spach.

A prostrate shrub, native to southern Europe, less than a foot high, with 5-angled branchlets, simple oblong-ovate sessile leaves, and axillary clusters of one to three small bright-yellow flowers.

80314. CYTISUS MONSPESSULANUS L. (*C. candicans* DC.).

A strong, erect-growing shrub which is evergreen in regions where the winters are mild. It becomes 10 feet or less high, with grooved branches, trifoliolate leaves having obovate leaflets less than an inch long, and fragrant bright-yellow flowers in 3-flowered to 9-flowered headlike racemes on leafy branches. It is native to the Canary Islands.

For previous introduction see No. 73539.

80315. CYTISUS MULTIFLORUS INCARNATUS Sweet.

Variety *Toome*. A slightly flushed form of the white Spanish broom which is a shrub up to 10 feet high, native to Spain and northern Africa, with upright slender branchlets bearing trifoliolate leaves below and simple ones above. The flowers, in axillary clusters of one to three, are produced very profusely.

80308 to 80339—Continued.

80316. CYTISUS NIGRICANS ELONGATUS Borkh. (*C. nigricans carlieri* Hort.).

Variety *Carlieri.* A deciduous shrub, native to Europe, 2 to 4 feet high, with erect pubescent branches, long-stemmed leaves composed of oval pubescent leaflets up to an inch long, and long slender racemes, 3 to 8 inches long, of rich-yellow flowers. This variety differs from the typical species in that it blooms a second time in the autumn at the top of the elongated fruiting racemes.

For previous introduction see No. 43838.

80317. CYTISUS PRAECOX ALBUS T. Smith. **Warminster broom.**

A smaller and more pendulous white-flowered form of *Cytisus praecox* which is a hybrid between *C. purgans* and *C. multiflorus.* The simple leaves are oblanceolate to linear spatulate and are silky pubescent.

80318. CYTISUS PURGANS (L.) Spach. **Province broom.**

A dwarf bushy deciduous shrub about 3 feet high, native to the Mediterranean region, often nearly leafless, with simple oblanceolate leaves which soon fall and fragrant deep golden-yellow flowers half an inch long produced singly or in pairs from the year-old wood.

For previous introduction see No. 73542.

80319. CYTISUS ROCHELII Wierzb.

A shrub, native to Hungary, 3 to 4 feet high, with villous terete branchlets, trifoliolate leaves of oblong-lanceolate leaflets an inch long, and terminal heads of pale-yellow flowers with brownish spots.

80320 to 80324. CYTISUS SCOPARIUS (L.) Link. **Scotch broom.**

80320. *Donard seedling.* A new variety of vigorous growth, bearing reddish-crimson flowers suffused with grayish white and yellow.

80321. *Rosy Moonlight.* A vigorous grower bearing cream-colored flowers tinged with rose.

80322. *Dorothy Walpole.* A hardy grower bearing an abundance of flowers with rich velvety crimson wings and rose standards.

80323. *Fulgens.* A variety bearing beautiful flowers with deep orange standards and rich crimson keels.

80324. *Lord Lambourne.* A variety in which the flowers have wings of vivid scarlet-crimson color and a standard of soft cream color tinted with rose on the reverse.

80325. CYTISUS sp.

Cornish Cream. A new and charming variety raised by P. D. Williams, Lanarth, St. Keverne, Cornwall. It produces an abundance of good-sized flowers with cream-colored standards and pure yellow on the keel, which gives a distinct and attractive appearance to the blooms. A vigorous grower, especially effective for mass effects.

80326. CYTISUS sp.

Moonlight. Flowers are sulphur yellow.

80308 to 80339—Continued.

80327. CYTISUS sp.

Osborni. A variety of recent introduction, raised at Kew. It is later flowering than *Cytisus praecox,* and although similar in growth, is perhaps of rather a stiffer habit, while there is no trace of the characteristic scent of that variety. The flowers are borne abundantly, and they are golden yellow in the bud, opening to a delightful pale yellow.

80328 to 80339. ERICA spp. Ericaceae. **Heath.**

80328. ERICA ARBOREA ALPINA Dieck.

An evergreen bushy heath, native to the mountainous regions of Cuenca, Spain, which has proved hardy at the Royal Botanic Gardens, Kew, England. The dull-white flowers are borne in stiff pyramidal clusters, but the chief beauty of the plant lies in the rich, cheerful green color of the foliage which, in England, lasts throughout the winter.

For previous introduction see No. 62023.

80329 to 80333. ERICA CARNEA L. **Spring heath.**

80329. *Pink Beauty.*

80330. *C. J. Backhouse.* Flowers blush white.

80331. *Praecox Rubra.* A variety with rich rose carmine flowers.

80332. *Prince of Wales.* The flowers are soft pink.

80333. *Vivelli.* A red-flowered variety.

80334. ERICA CILIARIS L. **Fringed heath.**

Variety *Watsoni.*

80335. ERICA CINEREA L. **Twisted heath.**

Variety *atropurpurea.* Flowers deep purple.

80336. ERICA MACKAII Hook. (*E. mackaiana* Bab.).

Variety *plena.* A double-flowered form of this hybrid between *Erica terralix* and *E. ciliaris,* which has ovate-oblong leaves in whorls of four and umbels of rosy flowers.

80337. ERICA MEDITERRANEA L. **Biscay heath.**

Variety *Brightness.* Flowers bright pink.

80338. ERICA TETRALIX L. **Crossleaf heath.**

Variety *rubra.* Attractive carmine flowers.

80339. ERICA WILLIAMSII Druce.

A hybrid between *Erica tetralix* and *E. vagans,* with puberulous branchlets, sparingly ciliate leaves, and rosy salmon flowers borne during the late summer.

80340 to 80348. TRITICUM spp. Poaceae.

From Perth, Western Australia. Seeds presented by G. L. Sultan, Director of the Department of Agriculture. Received May 2, 1929.

80340 to 80348—Continued.

80340 to 80347. TRITICUM AESTIVUM L. (*T. vulgare* Vill.) **Common wheat.**

80340. C 74. *D. A. C. A179 × Florence.*

80341. C 80. *Dindiloa × Labawa.*

80342. C 86. *Florence × Velvet Don.*

80343. M 11. *Comeback × Florence.*

80344. M 28. *Dindiloa × Labawa.*

80345. M 29. *Dindiloa × Labawa.*

80346. M 30. *Dindiloa × Labawa.*

80347. P 1511. *Genoa.*

80348. TRITICUM DURUM Desf. **Durum wheat.**

P 1211. *Kubanka.*

80349. SACCHARUM SPONTANEUM L. Poaceae. **Grass.**

From Coimbatore, India. Cuttings presented by the Imperial Sugar Cane Breeding Station, through E. W. Brandes, Bureau of Plant Industry. Received April 26, 1929.

A perennial tropical grass closely related to the sugarcane. It is sometimes cultivated as a hedge plant.

For previous introduction see No. 77782.

80350 to 80355.

From Cape Town, Union of South Africa. Bulbs purchased from W. S. Duke & Co. Received February and March, 1926. Numbered in April 1929.

80350. LACHENALIA RUBIDA Jacq. Liliaceae. **Cape-cowslip.**

A herbaceous perennial, native to South Africa, with a globose bulb from which arise usually two lanceolate, spotted leaves 6 inches long and a naked stalk 9 inches high, bearing a close raceme of small cylindrical, mostly drooping flowers. The outer segments are bright red tipped with green, and the inner segments are longer and yellow.

80351. LACHENALIA TRICOLOR AUREA (Lindl.) Hook. f. Liliaceae. **Cape-cowslip.**

A herbaceous perennial, native to South Africa, closely resembling *Lachenalia rubida*, but the flowers are bright orange-yellow.

80352 to 80354. ORNITHOGALUM spp. Liliaceae.

80352. ORNITHOGALUM ARABICUM L. **Arabian star-of-Bethlehem.**

A herbaceous perennial, native to the Mediterranean region, with a thick, ovoid bulb, five to eight glaucous green leaves 12 to 18 inches long, and a scape 1 to 2 feet high, bearing a 6-flowered to 12-flowered raceme of fragrant white flowers. The pistil is black and adds to the attractiveness of the flowers. This species is very popular for pot culture.

80353. ORNITHOGALUM SPECIOSUM Baker. **Star-of-Bethlehem.**

A herbaceous perennial, native to South Africa, with a globose bulb an inch in diameter, four short thick linear leaves, and a scape a foot high which bears three to five white flowers having an orange-red spot at the tip.

80350 to 80355—Continued.

80354. ORNITHOGALUM THYRSOIDES AUREUM (Curtis) Baker. **Chincherichee.**

An ornamental, native to South Africa, with a globose bulb about 2 inches thick and five or six very narrow leaves 6 inches to a foot long. The golden-yellow flowers, sometimes an inch long under cultivation, are borne in rather dense racemes on a scape about a foot high. In a dried condition these make excellent "everlasting" flowers.

For previous introduction see No. 66891.

80355. VALLOTA SPECIOSA (L. f.) Dur. and Schinz. (*V. purpurea* Herbert). Amaryllidaceae. **Scarboro-lily.**

A herbaceous perennial with an ovoid bulb, 6 to 18 lanceolate leaves 1 to 2 feet long, and a hollow stem 2 to 3 feet high, bearing an umbel of six to nine scarlet funnel-shaped flowers. Native to southern Africa.

80356. HELENIUM AUTUMNALE L. Asteraceae. **Sneezeweed.**

From Niederwalluf am Rheim, Germany. Plants purchased from Goos & Koenemann. Received April 24, 1929.

Wyndley. A plant 2½ feet high, bearing bronzy yellow flowers.

80357 to 80381.

From China. Seeds and rhizomes collected by J. F. Rock, National Geographic Society, Washington, D. C. Received April 29, 1929.

80357. ABIES sp. Pinaceae. **Fir.**

No. 17361. November, 1928. A lovely and stately tree, 60 to 80 feet high, growing in the forests of Tokesher, northwestern Yunnan, at an altitude of 12,000 feet. The needles are silvery beneath, and the very large cones are deep purplish black.

80358. ACONITUM sp. Ranunculaceae. **Monkshood.**

No. 17376–A. November, 1928. A poisonous plant growing in the alpine meadows of the Likiang Snow Range, Yunnan, at altitudes between 11,000 and 12,000 feet. It is 3 to 4 feet high and bears rich blue flowers.

80359. ANEMONE sp. Ranunculaceae.

No. 17325. October, 1928. A plant half a foot high, growing in the glacier moraine of Sabaloko, at the foot of Mount Satseto, Likiang Snow Range, Yunnan, at an altitude of 12,000 feet. The leaves are a rich glossy green on the under surface, and the large white flowers have a purplish tinge beneath.

80360. BAUHINIA sp. Caesalpiniaceae.

No. 17377. November, 1928. A shrub or small tree, which prefers dry sunny situations, growing on the islands in Lake Yungning, northwestern Yunnan, at an altitude of 9,600 feet. It is 15 feet high and bears small white flowers.

80361. COTONEASTER sp. Malaceae.

No. 17365. December, 1928. A shrub growing in the Litang River gorge at Kere, Muli, southwestern Szechwan, at an altitude of 9,500 feet. It is 6 to 10

80357 to 80381—Continued.

feet high, with small ovoid leaves, and is very ornamental with its mass of brilliant red berries.

80362. DELPHINIUM sp. Ranunculaceae. **Larkspur.**

No. 17332. October, 1928. A larkspur growing on glacier gravel and gravelly moraines at Sabaloko, foot of Mount Satseto, Likiang Snow Range, Yunnan, at an altitude of 12,000 feet. It is a beautiful species with rich glossy green leaves forming globose rosettes and large rich blue silky flowers an inch in diameter.

80363. ILEX sp. Aquifoliaceae. **Holly.**

No. 17368. January, 1929. A beautiful shrub growing in the spruce forests on the southern slope of Mount Gibbah, Muli, southwestern Szechwan, at an altitude of 11,500 feet. It is 6 to 10 feet high, with hollylike evergreen leaves and brilliant red berries.

80364. INCARVILLEA GRANDIFLORA Bur. and Franch. Bignoniaceae.

No. 17371. December, 1928. A plant growing on the alpine meadows of Shelan, between Kulu and Muli, southwestern Szechwan, at an altitude of 13,000 feet. It is 3 feet high, and bears purplish red flowers.

80365 to 80367. IRIS spp. Iridaceae.

80365. IRIS sp.

No. 17370. December, 1928. A purple-flowered species growing in forest clearings and alpine meadows of Kulu, southwestern Szechwan, at an altitude of 13,000 feet.

80366. IRIS sp.

No. 17373. November, 1928. A plant growing in the alpine meadows of Mount Yowubo, Yungning Territory, Yunnan, at an altitude of 12,500 feet. It is 1 to 2 feet high, and bears purple or yellow flowers.

80367. IRIS sp.

No. 17375. November, 1928. A medicinal plant, used for colds and stomach trouble, called *Chumbu* by the Hlihin people in Szechwan. It grows wild in grassy swamps and marshy meadows of the Chienso Tussu Territory, southwestern Szechwan.

80368. MALUS sp. Malaceae. **Apple.**

No. 17360. November, 1928. A wide-spreading tree growing in the forests and clearings of Tokesher, northwestern Yunnan, at an altitude of 10,000 feet. It is 30 to 40 feet tall, with leaves white beneath and small, yellow and red fruits half an inch in diameter.

80369. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. Papaveraceae. **Yellow Chinese-poppy.**

No. 16020. November, 1928. A plant, 1 to 2 feet high, bearing rich golden-yellow flowers. It is found in the alpine meadows of Mount Gibbah, Muli, southwestern Szechwan, at an altitude of 13,000 feet.

For previous introduction see No. 58374.

80357 to 80381—Continued.

80370. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

No. 17374. November, 1928. This red bean is cultivated by the Hsifau tribes of southwestern Szechwan and by the Hlihin tribes of northwestern Yunnan. It is a delicious bean when well cooked and reminds one very much of the Mexican bean. It is cultivated at Gawua, Yuli Territory, at an altitude of 10,000 feet.

80371. STRANVAESIA sp. Malaceae.

No. 17363. November, 1928. A lovely tree, 15 to 20 feet high, growing in the forests of Peshui, Likiang Snow Range, Yunnan, at an altitude of 10,500 feet. The autumnal leaves are a brilliant red on the upper whorl and a deep glossy green on the lower whorl. The gorgeous red berries are in large dense corymbs and are very ornamental.

80372. PRIMULA FORRESTII Balf. f. Primulaceae. **Primrose.**

No. 17376–B. October, 1928. A lovely perennial plant with a woody rootstock, which reaches an age of 100 years or more. It grows in rocky limestone soil on sunny slopes of the Likiang Snow Range, Yunnan, at an altitude of 11,000 feet. The flowers are a deep golden yellow, and the leaves, when crushed, have the odor of fresh apples.

For previous introduction see No. 59710.

80373. PRUNUS sp. Amygdalaceae. **Cherry.**

No. 16794. August, 1928. A shrub, 10 feet high, branching from the base. It grows on dry slopes below the monastery at Muli in the Litang River Valley, Szechwan, at an altitude of 9,000 feet. The leaves are grayish tomentose, and the flowers are large, white, and ornamental.

80374 to 80381. RHODODENDRON spp. Ericaceae.

80374. RHODODENDRON CORIACEUM Franch.

No. 17354. November, 1928. A shrub, 3 to 4 feet high, growing on the alpine slopes of the rocky regions of Mount Lapo, Yunnan, at an altitude of 12,500 feet.

80375. RHODODENDRON HELIOLEPIS Franch.

No. 17357. November, 1928. A tree, 15 to 18 feet high, growing in the forests of spruce and hemlock at Gokhuko, northwestern Yunnan. The leaves are brown beneath, and the flowers are a rich purple.

For previous introduction see No. 59715.

80376. RHODODENDRON sp.

No. 16164. December, 1928. A wide-spreading tree, 15 to 20 feet high, growing in the spruce and hemlock forests of Djago, between Muli and Kulu, Szechwan, at altitudes between 11,000 and 11,500 feet. The leaves, chocolate-colored beneath, are a foot broad and 2 feet or more long, and the red flowers borne during February are in large corymbs.

80357 to 80381—Continued.

80377. RHODODENDRON sp.

No. 17352. November, 1928. A very attractive shrub, 2 feet high, growing in northwestern Yunnan on well-drained dry gravelly banks in pine forests at an altitude of 10,000 feet. It has small linear leaves and small tubular white to rich pink flowers borne in globose heads.

80378. RHODODENDRON sp.

No. 17356. November, 1928. A shrub or small tree 12 to 15 feet high, growing in spruce forests and on the edge of the alpine meadows of Gokhuko, northwestern Yunnan, at an altitude of 12,000 feet. The flowers are white to pink with purple spots.

80379. RHODODENDRON sp.

No. 17358. November, 1928. A shrub or small tree, 12 to 15 feet high, growing in spruce forests and on the edge of the alpine meadows of Gokhuko, northwestern Yunnan. The small ovate leaves are acute at both ends and pale beneath, and the flowers are yellow.

80380. RHODODENDRON sp.

No. 17359. November, 1928. A shrub, 2 to 3 feet high, growing in the swampy alpine meadows of Gokhuko, northwestern Yunnan, at an altitude of 12,000 feet. The leaves are very small, and the flowers are blue with a purplish tinge.

80381. RHODODENDRON sp.

No. 17366. December, 1928. A shrub or small tree, 10 to 15 feet high, growing in the fir forests of Kulu, eastern Muli Territory, Szechwan, at an altitude of 13,000 feet. It is very ornamental and is said to have red flowers.

80382 to 80387. CANNA EDULIS Ker. Cannaceae. **Edible canna.**

From Honolulu, Hawaii. Bulbs presented by J. M. Westgate, Director, Hawaii Agricultural Experiment Station. Received May 15, 1929.

80382. 1749.2. Seedling.

80383. 1749.5. Seedling.

80384. 1749.6. Seedling.

80385. 1749.7. Seedling.

80386. 1039.

80387. 2078. Java canna.

80388. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Yamaguchi Ken, Honshu, Japan. Seeds collected by R. K. Beattie, Bureau of Plant Industry. Received May 15, 1929.

No. 849. A.

80389 to 80392. ORYZA SATIVA L. Poaceae. **Rice.**

From Hooghly District, Bengal, India. Seeds obtained through R. Y. Jarvis, American Consul, Calcutta, India. Received May 15, 1929.

80389. *Balam.*

80390. *Dudkalma.*

80389 to 80392—Continued.

80391. *Jatakalma.*

80392. *Lalkalma.*

80393 to 80411.

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co. Received April 5, 1929.

80393. BERBERIS SANGUINEA Franch. Berberidaceae. **Barberry.**

An evergreen shrub up to 6 feet high, with slender 3-parted spines, narrow-oblong spiny serrate leaves up to 4 inches long, golden-yellow flowers with red sepals, and bluish black fruits. It is native to western China.

80394 to 80398. COTONEASTER spp. Malaceae.

80394. COTONEASTER HARROVIANA Wilson.

An evergreen shrub, native to Yunnan, China, about 6 feet high, of a loose spreading habit, with shining dark-green silky tipped leaves, dense corymbs of white flowers, and red fruits.

For previous introduction see No. 72824.

80395. COTONEASTER sp.

Farrer No. 404.

80396. COTONEASTER sp.

M. V. No. 4524.

80397. COTONEASTER sp.

M. V. No. 4694.

80398. COTONEASTER sp.

Forrest No. 8119.

80399 to 80401. DEUTZIA spp. Hydrangeaceae.

80399. DEUTZIA SCHNEIDERIANA LAXIFLORA Rehder.

A handsome shrub, 6 feet high, with oblong-ovate leaves and white flowers borne abundantly in broad loose panicles. It is native to central China.

For previous introduction see No. 76185.

80400. DEUTZIA sp.

M. V. No. 4277. A handsome shrub closely related to *D. compacta* Craib., introduced from China by Maurice de Vilmorin. The pale-rose, semidouble flowers, larger than those of *D. compacta*, are in compact corymblike panicles.

80401. DEUTZIA sp.

M. V. No. 7264.

80402. EUONYMUS VERRUCOSUS Scop. Celastraceae.

An erect shrub, about 6 feet high, with oval-lanceolate, crenately serrulate, acuminate leaves 1 to 2½ inches long, yellowish red, deeply 4-lobed capsules, and black seeds partly exposed in the capsule. It is native to southeastern Europe and western Asia.

80403. ILEX PERNYI Franch. Aquifoliaceae. **Holly.**

A dense-growing evergreen holly of very dwarf compact habit, with small

80393 to 80411—Continued.

dark-green, spiny leaves squarish at the base and red berries. It is probably allied to *Ilex cornuta*, and was first discovered by Père Paul Perny during his travels in western China between 1850 and 1860.

For previous introduction see No. 67032.

80404. IRIS CLARKEI Baker. Iridaceae. **Clarke iris.**

For previous introduction and description see No. 80084.

80405. KITAIBELIA LINDEMUTHI Hort. Malvaceae.

Obtained by M. Lindemuth, gardener at the Botanical Garden, Berlin, by grafting *Kitaibelia vitifolia* on *Abutilon thompsoni*. It is especially attractive because of its variegated grapelike foliage and showy pink flowers.

80406. LABURNUM ANAGYROIDES ALSCHINGERI (Vis.) C. Schneid. (*Cytisus alschingeri* Hort.). Fabaceae. **Goldenchain.**

A form of the goldenchain with more silky and bluer-gray leaves and nearly erect racemes of golden-yellow flowers. Native to southern Europe.

For previous introduction see No. 76347.

80407. LONICERA sp. Caprifoliaceae. **Honeysuckle.**

Hers. No. 2004.

80408. PYRACANTHA sp. Malaceae. **Firethorn.**

M. V. No. 6257.

80409. SORBUS WILSONIANA C. Schneid. Malaceae.

A tree, up to 30 feet high, with elliptic-lanceolate yellowish green leaflets and rather small white flowers in large terminal corymbs. It is native to western China.

80410. VERONICA ROENITZERI Hort. Scrophulariaceae.

A herbaceous variety. (Has flowered only a little but suggests that it may prove somewhat like *V. spicata.*)

80411. VERONICA WALDSTEINII Hort. Scrophulariaceae.

A variety said to have spikes of blue flowers which appear very late in the summer.

80412 and 80413.

From Gambia, British West Africa. Seeds presented by Archibald Brooks, Director, Department of Agriculture. Received May 15, 1929.

80412. ADANSONIA DIGITATA L. Bombacaceae. **Baobab.**

A tree about 60 feet high and sometimes 30 feet in diameter, native to tropical Africa, with palmate leaves divided into five to seven lanceolate leaflets, white flowers 6 inches across, and large gourdlike fruits with edible pulp.

For previous introduction see No. 77271.

80412 and 80413—Continued.

80413. FICUS VOGELLI Miquel. Moraceae. **Fig.**

A beautiful shade tree of moderate size with large oblong elliptic leaves which are mostly gathered at the ends of the twigs. The small fruits are attractively grouped on the branches and produce many viable seeds. Native to tropical Africa.

For previous introduction see No. 70946.

80414 to 80416. MYOPORUM ACUMINATUM ANGUSTIFOLIUM Benth.

From South Australia. Seeds presented by W. J. Spafford, Deputy Director of the Department of Agriculture, Adelaide, South Australia. Received May 7, 1929.

An erect glabrous shrub with alternate nearly linear leaves 1 to 3 inches long, axillary clusters of two to four small campanulate white flowers, followed by slightly succulent fruits about a quarter of an inch in diameter. It is native to Queensland, Australia.

80414. Obtained from a tree about 14 feet high, growing in Rochester.

80415. Obtained from a shrub about 9 feet high, growing in Pekina.

80416. Obtained from a shrub about 9 feet high, growing in Port Germein.

80417 to 80421. FICUS spp. Moraceae. **Fig.**

From Manila, Philippine Islands. Seeds presented by W. H. Brown, Director of the Bureau of Science, Manila. Received May 16, 1929.

80417. FICUS CALOPHYLOIDES Elmer.

A large spreading tree, 70 feet high and 4 feet in diameter, native to the Philippine Islands, with elliptic leaves 5 inches long and flattened globose yellowish-brown fruits.

For previous introduction see No. 77657.

80418. FICUS INDICA L.

A tree up to 50 feet high, which resembles the banyan but does not take root from its branches. The leaves are 4 to 7 inches long, with four to six pairs of nerves, and the yellowish-red globose fruits, a third of an inch in diameter, are crowded together in sessile pairs. Native to tropical Asia and Malaya.

80419. FICUS MINAHASSAE (Teysm. and De Vr.) Miquel.

A rather small tropical tree, native to the Netherland East Indies, with a soft spongy trunk, irregularly heart-shaped acute leaves, and numerous small fruits about one-fourth of an inch long.

80420. FICUS NUDA Miquel.

A tropical woody plant, native to the Philippine Islands, which is closely related to *Ficus benjamina.* The elliptic or oblong leaves are somewhat leathery, and the small sessile fruits are globular.

80421. FICUS ODORATA (Blanco) Merr.

A tree, native to the Philippine Islands, 15 to 18 feet high. It is marked

80417 to 80421—Continued.

by its very rough, fragrant leaves which are sublanceolate with a 1-sided rounded margin at the base.

For previous introduction see No. 50698.

80422. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

From Doleib Hill, Nalakal, Anglo-Egyptian Sudan, Africa. Seeds presented by H. B. Gephardt, American Mission. Received May 20, 1929.

A pumpkin which requires a long growing season. It has a hard greenish rind when ripe, is of fair quality, and is a good keeper.

80423 to 80433.

From Newry, Ireland. Plants purchased from T. Smith, Daisy Hill Nursery. Received May 7, 1929.

80423 to 80431. CYTISUS spp. Fabaceae. **Broom.**

80423. CYTISUS ARDOINI Fourn.

A low decumbent shrub less than a foot high, with slightly grooved villous branchlets, trifoliolate leaves with obovate villous leaflets about half an inch long, and racemes of golden-yellow flowers. It is native to the southeastern part of France.

80424. CYTISUS BEANII Nichols.

This hybrid between *Cytisus ardoini* and *C. purgans* is a semiprostrate shrub 1 to 2 feet high, with simple linear pubescent leaves and clusters of one to three deep-golden flowers.

80425. CYTISUS PURPUREUS Scop.

Variety *incarnatus*. A form with flesh-colored flowers.

80426 to 80431. CYTISUS SCOPARIUS ANDREANUS Dipp. **Paradise broom.**

80426. *Prostratus*. A prostrate form.

80427. *Daisy Hill*. A variety bearing red and cream-colored flowers.

80428. *Dragonfly*. An upright shrub with slender green branches, small obovate leaflets, and flowers an inch across in shades of crimson and old gold.

80429. *Fairy*. An upright shrub with slender green branches, small obovate leaflets, and flowers an inch across, which are cream and pink.

80430. *Firefly*. An upright shrub with slender green branches, small obovate leaflets, and scarlet and yellow flowers an inch in diameter.

80431. *Newry Gold*. An upright shrub with slender green branches, small obovate leaflets, and flowers an inch across.

80432. DAPHNE BLAGAYANA Freyer. Thymelaeaceae. **Balkan daphne.**

A low diffusely branched shrub native to the mountains of southeastern Europe. The obovate leaves, 1 to 2 inches long, are crowded at the end of the branchlets, and the yellowish-white fragrant flowers, borne in heads, are followed by globose pinkish-white fruits.

For previous introduction see No. 40613.

80423 to 80433—Continued.

80433. DAPHNE CNEORUM L. Thymelaeaceae.

Variety *major*. A form having a more vigorous growth than the type and also larger flowers.

80434 and 80435.

From Angol, Chile. Seeds presented by D. S. Bullock, Escuela Agrícola de "El Vergel." Received May 7, 1929.

80434. LAPAGERIA ROSEA Ruiz and Pav. Liliaceae. **Red Chile-bells.**

This, the national flower of Chile, has been occasionally grown in northern greenhouses. It is an evergreen climber of slow growth, with slender, wiry stems, alternate narrowly ovate leaves, and bright-crimson, pendent tubular flowers about 3 inches long in the axils of the upper leaves or in terminal racemose clusters.

For previous introduction see No. 69168.

80435. LARDIZABALA BITERNATA Ruiz and Pav. Lardizabalaceae.

A shrubby evergreen climber with ternate or biternate dark-green leathery leaves 2 to 4 inches long which are either entire or armed with one or two spinelike teeth. The purple-brown flowers are dicecious. The staminate ones, about an inch across, are produced in a dense drooping raceme, while the pistillate flowers are larger and solitary, developing into edible oblong fleshy fruits 2 or 3 inches long. Native to southern Chile.

For previous introduction see No. 35960.

80436 to 80450.

From Kirkee, Poona, Bombay, India. Seeds presented by the Superintendent of the Ganeshkhind Botanical Gardens, through William H. Beach, American Vice Consul in Charge, Bombay. Received May 20, 1929.

80436 to 80444. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

80436. A black-seeded variety.

80437. A white-seeded variety.

80438. No. 4. The fruits are large and long, with black skin, red flesh, and brown seeds.

80439. No. 5. A variety with small, long fruits which have black skin, red flesh, and black seeds.

80440. No. 6. A variety producing long, large fruits with grayish white skin, red flesh, and black seeds.

80441. No. 7. A variety producing small, round fruits with grayish white skin, rose-colored flesh, and brown seeds.

80442. No. 8. The fruits are large and long, with black skin, red flesh, and whitish seeds.

80443. No 9. A variety with long, white fruits which have red flesh and black seeds.

80444. No. 10. The fruits are large and round, with white skin, red flesh, and black seeds.

80436 to 80450—Continued.

80445 to 80450. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

80445. Mixed seeds.

80446. *Chibud.*

80447. *Narri.*

80448. No. 1. A variety producing oblate fruits with white flesh.

80449. No. 2. A variety producing oblate fruits with red flesh.

80450. No. 3. *Jaw.* A variety producing very sweet globular fruits.

80451. VOANDZEIA SUBTERRANEA (L.) Thouars. Fabaceae.

From Bibanga, District du Lomami, Belgian Congo, Africa. Seeds presented by Walter D. Pettis, American Presbyterian Congo Mission, Luebo, Belgian Congo. Received May 17, 1929.

Nyimu. A plant which thrives best on a red sandy soil and matures in less than six months from the time it is planted. It is not of very much value as a human food, but as a stock food it may be well worth trying.

For previous introduction see No. 78255.

80452 to 80454. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Damghan, Persia. Nuts obtained from Jalil K. Hashimzade, Ministry of Public Works, Department of Roads, Teheran, through Augustin Ferrin, American Consul, Teheran. Received May 25, 1929.

80452. A variety producing large nuts. The shells are tinted pink inside.

80453. A variety producing medium-sized nuts with mostly dark-colored shells.

80454. A variety producing small nuts with mostly light-colored shells.

80455 to 80498.

From Japan. Bulbs and seeds collected by P. H. Dorsett and W. J. Morse, Agricultural Explorers, Bureau of Plant Industry. Received May 27, 1929.

80455. LILIUM sp. Liliaceae. **Lily.**

No. 111. April 23, 1929. Bulbs obtained in the market at Tokyo. A species used as a vegetable and also probably as an ornamental.

80456 and 80457. ZINZIBER OFFICINALE Roscoe. Zinziberaceae. **Ginger.**

80456. No. 115. April 23, 1929. Roots of a commercial ginger obtained in the market at Tokyo.

80457. No. 123. April 27, 1929. Roots sent from Tokyo by a nurseryman specializing in the growing of ginger.

80458. ZINZIBER sp. Zinziberaceae.

No. 114. April 23, 1929. Forcing roots obtained at Tokyo.

80459 to 80498. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

80459. No. 2. Obtained at the National Japanese Food Show held at Uyeno Park, Tokyo, April 5, 1929. A mixed sample taken from a basket of seed showing the soybeans used in the manufacture of bean curd, or tofu.

80455 to 80498—Continued.

80460. No. 13. Obtained in the suburbs of Tokyo, April 11, 1929, and originally grown in Hokushu. *Maru Kuro.* A black-seeded variety said to be used as a candied bean, as which it is called *Mimame.*

80461. No. 14. Obtained from Nishigahra, Tokyo, April 11, 1929. *Wase Eda Mame.* A greenish-yellow seeded variety originally grown in Hokushu. It is said to be used green.

80462. No. 15. Obtained in the suburbs of Tokyo, April 11, 1929. *Furisode.* A greenish-yellow seeded variety originally grown in Hokushu. It is said to be used in the manufacture of bean curd or tofu, soy sauce, and miso.

80463. No. 16. Obtained in the suburbs of Tokyo, April 11, 1929, and originally grown in Hokushu. *Tsurunoko.* A large yellow-seeded variety said to be used in making bean curd or tofu, miso, soy sauce, and natto.

80464. No. 17. Obtained in the suburbs of Tokyo, April 11, 1929, and originally grown in Hokushu. *Hira Sata Kuro Daizu.* A medium large flat black-seeded variety said to be used as a candied bean.

80465. No. 31. From the Imperial Seed Co., Takinogawa, Tokyo, April 15, 1929, and originally grown in the Tokyo district. *Chusei O Saya Eda Mame.* A large yellow-seeded variety for garden purposes, said to be used principally as a green bean, being cooked in the pod.

80466. No. 32. Obtained at Nichigahara, Tokyo, April 15, 1929. *Okuro Maru Daizu.* A round black-seeded variety grown in Hokushu. It is said to be used as a candied bean, when it is called *Mimame.*

80467. No. 33. Obtained in Takadacho, Tokyo, April 15, 1929, and originally grown in Hokushu. *Ao Daizu.* A large greenish-yellow seeded variety said to be used in making bean curd, miso, natto, and soy sauce. It is also used for forage and green manure.

80468. No. 34. Obtained in Takadacho, Tokyo, April 15, 1929, and originally from Hokushu. *Tsurunoko Daizu.* A large yellow-seeded variety said to be used in making bean curd, soy sauce, natto, and miso. It is also used for forage and green manure.

80469. No. 35. Obtained in Takadacho, Tokyo, April 15, 1929, and originally from Hokushu. *Kuro Maru Daizu.* A large black round-seeded variety said to be used principally as candied beans.

80470. No. 36. From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally from the Tokyo district. *Souseikurome O Saya Daizu.* An early variety with large greenish-yellow black-eyed seeds and large pods. It is said to be used for oil, soy sauce, miso, natto, and bean curd.

80471. No. 37. From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally from the Tokyo district. *Sousei Kuro Sakigake.* An early variety with large black seeds, said to be used principally as candied beans.

80455 to 80498—Continued.

80472. No. 38. From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929. *Chusei O Saya Eda Mame.* A large yellow-seeded variety said to be the largest soybean used for garden purposes and to have a sweet flavor. It is said to be used principally as a green bean, being cooked in the pod.

80473. No. 39. From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally from the Tokyo district. *Cha Mame.* A large brown-seeded variety said to be used as a green bean when boiled in the pod.

80474. No. 40. Obtained at Nishigahara, Tokyo, April 15, 1929, and originally from Hokushu. *Shiro Tsubu.* A yellow-seeded variety said to be used in making bean curd or tofu, natto, and soy sauce.

80475. No. 41. Obtained from the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally from the Tokyo district. *Higan Mame.* A rather late yellow-seeded variety said to have white sweet meat and to be used as a green bean, being cooked in the pod.

80476. No. 42. Obtained from the Imperial Seed Co., Takinogawa, Tokyo, April 15, 1929, and originally from the Tokyo district. *Sousei O Saya Eda Mame.* One of the earliest varieties of garden soybeans with large pods and large yellowish-green seeds. It is said to be very sweet as a green bean, being cooked in the pod.

80477. No. 43. From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally from Hokushu. *Sousei Ao Sakigake.* An early green variety with medium, small yellowish-green seeds. It is said to be used in making soy sauce, bean curd, miso, and natto.

80478. No. 60. Obtained from the Japan Seed Co., Shibuya, Tokyo, April 19, 1929, and originally from Fukushima Ken. *Chusei O Saya Daizu.* A middle-season variety with yellow seeds. It is used as a green vegetable or as dried beans in making tofu.

80479. No. 62. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929, and originally from Iwate Ken, northeastern Japan. *Shikou Obbikuri Daizu.* A sweet greenish-yellow variety said to be used as a green vegetable, and also when ripe in making miso and bean curd.

80480. No. 63. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929, and originally from the Saitama Ken. *Gokuwase Daihosan Shinbon Daizu.* One of the earliest varieties with an abundance of pods containing yellow seeds. It is said to be used especially as a green vegetable and is the earliest of the varieties used for this purpose.

80481. No. 64. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929. *Roknsun Daizu.* Six-inches soybean, meaning that 10 beans equal 6 inches. A large flat yellow-seeded variety used as a green vegetable like the green Lima bean.

80482. No. 65. From the Japan Seed Co., Shibuya, Tokyo, April 19, 1929, and originally from Fukushima Ken, northeastern Japan. *Sousei O Saya Daizu.* An early large-podded soybean with large greenish-yellow seeds. It is said to be used as a green vegetable, and when dry it is used for bean curd and miso.

80483. No. 66. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929, and originally from Nagano Ken, central Japan. It is said to be used principally as a green vegetable. This variety is called "seaweed" because of its flavor.

80484. No. 67. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, and originally from Saitama Ken. *Sato Daizu.* A black seeded soybean said to be used as candy beans.

80485. No. 68. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929, and originally from Saitama Ken. *Chusei Hattoku Daizu.* A middle-season variety with yellow seeds. It is said to be used as a green vegetable.

80486. No. 69. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929, and originally from Saitama Ken. *Bansei Gokudai Tsukimi Daizu.* A large late harvest-moon soybean with large yellow seeds. It is said to be used as a green vegetable.

80487. No. 72. From the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929, and originally from Saitama Ken. *Shin Honen Daizu.* A new soybean with an abundance of pods containing yellow seeds. It is used for miso, soy sauce, and bean curd.

80488. No. 97. From T. Sakata & Co., Yokohama, April 26, 1929. *Eda Mame Uase Chaurame.* An early tea-colored variety with medium-large brown seeds. It is said to be used green like the Lima bean.

80489. No. 98. From T. Sakata & Co., Yokohama, April 26, 1929. *Eda Mame Uase Ao Sakigake.* One of the earliest of the green vegetable soybeans with medium-sized greenish-yellow seeds. It is said to be used like the Lima bean.

80490. No. 99. From T. Sakata & Co., Yokohama, April 26, 1929, and originally from Tamba Province, Kyoto Prefecture. *Tamba Otsubu Daizu.* A variety with medium-large yellow seeds used green like the Lima bean, the dried beans being used for bean curd or tofu.

80491. No. 100. From T. Sakata & Co., Yokohama, April 26, 1929. *Eda Mame Uase Kuro Sakigake.* An early variety with medium-large round black seeds, used for cooking with sirup as a candied bean.

80455 to 80498—Continued.

80492. No. 201. From T. Sakata & Co., Yokohama, April 26, 1929. *Eda Mame Uase Kurome Dzaya.* An early large-podded variety with medium-sized greenish-yellow seeds which have black seed scars. It is used green in the same way as Lima beans.

80493. No. 202. From T. Sakata & Co., Yokohama, April 26, 1929. *Daikoku Eda Mame* (Daikoku's black vegetable soybean). A medium-sized slightly compressed black-seeded variety said to be grown in Hokushu. It is used as a candied bean.

80494. No. 203. From T. Sakata & Co., Yokohama, April 26, 1929. *Tsurunoko Daizu.* A small, round, smooth-skinned variety with medium-sized yellow seeds. It is used as a green vegetable and also dried, and is especially good for making bean curd. It is said to have a high protein content.

80495. No. 204. From T. Sakata & Co., Yokohama, April 26, 1929. *Otsubu Muriname.* A medium-large seeded variety with black seed slightly compressed. It is used for cooking in sirup as a candied bean.

80496. No. 205. From T. Sakata & Co., Yokohama, April 26, 1929. *O Tsuba Uase Aoshiro Eda Mame.* An early large variety with medium-sized greenish-yellow seeds, said to be grown in Hokushu. It is used green like the Lima bean, and the dried beans are used for making soy sauce, miso, natto, and been curd.

80497. No. 206. From T. Sakata & Co., Yokohama, April 26, 1929. *Yedamame Uase Higanmame.* An early equinoctial variety with medium-large, yellow seeds with a brown hilum. It matures about the 18th of September. It is used as a green vegetable, and the dried beans are used for soy sauce, bean curd, and natto.

80498. No. 207. From T. Sakata & Co., Yokohama, April 26, 1929. *O Tsubu Aojiro Daizu.* A large greenish-yellow seeded variety said to be grown in Hokushu. It is said to be used as a green vegetable, and the dried beans are sometimes used in making white miso and natto.

80499. XIMENIA AMERICANA L. Olacaceae. **False sandalwood.**

From the Juba region, Italian Somaliland, Africa. Seeds presented by Dr. Mario Calvino, San Remo, Italy. Received May 31, 1929.

A widely distributed tropical tree with clustered oblong-obtuse leaves, small yellow flowers, and yellow, plumlike fruits inclosing a white nut. In Somaliland, where the fruit is known as "ciunducua," the natives eat the nut, the flesh being too acid.

80500. HUPELANDIA ANAY Blake. Lauraceae. **Anay.**

From Guatemala. Budwood presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received May 24, 1929.

Budwood from a tree planted in the grounds of the United Fruit Co.'s hospital, Quirigua, Guatemala, in 1917. A rather

80500—Continued.

slender tree between 60 and 70 feet high, with nearly smooth, rich red-brown bark which is grayish in places. The young leaves are softly pubescent below and sparsely hairy above. It is said that the flowers are borne during May. The smooth, glossy, purplish-black fruits, 4 to 6 inches long, are slender pyriform, sometimes curved, and pointed at the apex. They ripen during August and September.

For previous introduction see No. 43432.

80501 to 80524.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, Agricultural Explorers, Bureau of Plant Industry. Received May 27, 1929.

80501 and 80502. CANAVALIA ENSIFORMIS (L.) DC. Fabaceae. **Jack bean.**

80501. No. 27. Obtained in Nishigahara, Tokyo, Aprli 11, 1929. *Tsurunashi.* A large white-seeded bean of the bush type grown in the Tokyo district. It is said to be used for cooking, pickling, and medicinal purposes.

80502. No. 208. Obtained from T. Sakata & Co., Yokohama, April 26, 1929. *Kodachi Natamame.* A white-seeded bean of the bush type which appears about the same as that now grown in the United States. The young pods are used for pickling.

80503 to 80505. CANAVALIA GLADIATA (Jacq.) DC. Fabaceae. **Sword bean.**

80503. No. 29. Obtained in Nishigahara, Tokyo, April 11, 1929. *Aka Natamame.* A red-seeded variety of the runner type grown in the Tokyo district. It is said to be used for cooking, pickling, and for medicinal purposes.

80504. No. 30. Obtained in Nishigahara, Tokyo, April 11, 1929. *Shiro Natamame.* A white-seeded variety of the runner type grown in the Tokyo district. It is said to be used for cooking, pickling, and for medicinal purposes.

80505. No. 209. From T. Sakata & Co., Yokohama, April 26, 1929. *Shiro Natamame.* A white-seeded variety of the runner sword bean. The young pods, 3 to 4 inches long, are used for pickling.

80506 to 80509. DOLICHOS LABLAB L. Fabaceae. **Hyacinth bean.**

80506. No. 28. Obtained in Nishigahara, Tokyo, April 11, 1929. *Fufimame.* A brown-seeded bean of the runner type grown in the Tokyo district. The beans are said to be used for cooking.

80507. No. 53. Obtained from the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929. *Shirobana Tsuruari Fugimame.* A brown-seeded bean of the white-flowered runner variety grown in the Tokyo district. The dried beans are said to be used for cooking.

80508. No. 54. Obtained from the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929. *Akabana Tsuruaru Fugimame.* A brown-seeded bean of the red-flowered runner variety grown in the Tokyo district. The beans are dried for use.

80501 to 80524—Continued.

80509. No. 55. Obtained from the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929. *Furnichi Fugimame.* A very dark-brown seeded variety of bush bean developed by Professor Furnichi, Tokyo Agricultural College, Tokyo. It is said to be used as green beans boiled in the pod, and the beans are also used when dried.

80510 to 80517. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

80510. No. 18. *Azuki.* Obtained in the suburbs of Tokyo, April 11, 1929, and originally grown in Hokushu. A red-seeded variety said to be used chiefly in the manufacture of a jellylike flour for confections.

80511. No. 19. *Sarashi Au.* Obtained in Nishigahara, Tokyo, April 11, 1929, and originally grown in Hokushu. A red-seeded variety said to be used in the manufacture of a jellylike flour for confections.

80512. No. 20. *Azuki Dainagon.* Obtained in Nishigahara, Tokyo, April 11, 1929, and originally grown in Hokushu. A red-seeded variety said to be used in the manufacture of a jellylike flour for confections.

80513. No. 21. *Azuki Dainagon.* Obtained in the suburbs of Tokyo, April 11, 1929, and originally grown in Hokushu. A red-seeded variety said to be used in the manufacture of a jellylike flour for confections.

80514. No. 22. *Usukawa Azuki.* Obtained in Nishigahara, Tokyo, April 11, 1929, and originally grown in Hokushu. A red-seeded variety said to be used in the manufacture of a jellylike flour for confections.

80515. No. 61. *Shiro Azuki.* From the Tokyo Seed, Plant, & Implement Co., Konon, Tokyo, April 19, 1929, and originally from near Tokyo, Saitama Ken. It is said to be used for making confections and for flour which is cooked at once and then dried for future use.

80516. No. 70. *Dainagon Azuki.* Obtained in Shibuya, Tokyo, April 19, 1929, and originally from Hokushu. A large red-seeded variety said to be used in making many confections and as a flour.

80517. No. 210. *Dainagon Azuki.* From T. Sakata & Co., Yokohama, April 26, 1929. A large reddish-brown seeded variety used for making all kinds of confections.

80518 and 80519. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

80518. No. 26. *Yaenari* or *Ao Azuki.* Obtained in Nishigahara, Tokyo, April 11, 1929. A small green bean of the bush type grown in the Tokyo district. It is said to be used for bean sprouts and in making confections.

80519. No. 56. *Yaenari.* Obtained from the Imperial Seed Co., Takinogawa. Tokyo, April 15, 1929, and originally grown in the Tokyo district. A green mung bean said to be used chiefly for sprouts, but it is also used as flour in making confections.

80501 to 80524—Continued.

80520 to 80523. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Asparagus-bean.**

80520. No. 24. *Onage Sasage.* Obtained in Nishigahara, Tokyo, April 11, 1929. A light red-seeded variety of the runner type said to be used as string beans when the pods are young.

80521. No. 25. *Turoku Sasage.* Obtained in Nishigahara, Tokyo, April 11, 1929. A light red-seeded variety of the runner type grown in the Tokyo district. It is said to be used as string beans when the pods are young.

80522. No. 57. *Kuro Sanjoku Sasage.* Obtained in Nishigahara, Tokyo, April 15, 1929, and originally grown in the Tokyo district. A black-seeded variety said to be used as string beans when the pods are young, and the seeds are also dried and used as baked beans.

80523. No. 58. *Juroku Sasage.* Obtained from the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally grown in the Tokyo district. A red-seeded variety said to have pods 2 feet long, and to be used as string beans when the pods are young.

80524. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 23. *Kintoki Sasage.* Obtained from the suburbs of Tokyo, April 11, 1929. A red-seeded variety of the bush type grown in the Bicchu district (Inland Sea). It is said to be used as a string bean when young; the beans also are used when dried.

80525 and 80526.

From Formosa, Argentina. Seeds presented by Dr. Lorenzo R. Parodi, University of Buenos Aires. Received May 25, 1929.

80525. CHLORIS CASTILLONIANA Lillo and Parodi. Poaceae. **Grass.**

A stiffly erect grass, 4 to 6 feet high, with linear leaves and a plumelike inflorescence 5 to 8 inches long. It is native to Argentina.

80526. PANICUM PAUCISPICATUM Morong. Poaceae. **Grass.**

A coarse grass, native to Argentina, which roots at the lower nodes and later ascends to 3 feet. The lanceolate leaves are 4 to 6 inches long by an inch broad, and the flowers are in a loose spike.

80527 to 80529. CHAYOTA EDULIS Jacq. (*Sechium edule* Swartz). Cucurbitaceae. **Chayote.**

From Guatemala. Fruits presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received November 26, 1928. Numbered in April, 1929.

80527. No. 8. A smooth medium-sized green variety.

80528. No. 11. A large yellowish green variety which is very spiny.

80529. No. 15. A small white variety.

80530. PROSTANTHERA LASIANTHOS Labill. Menthaceae.

From Tasmania. Seeds presented by L. A. Evans, Headquarters and Technical Service of the Department of Agriculture, Hobart. Received May 31, 1929.

Seeds of the so-called Christmas or native lilac of Tasmania, collected by James Bacon, Verona, near the Huon River Estuary. It is a tall erect shrub up to 12 feet high, having lanceolate-serrate leaves 3 inches long and terminal compound racemes of white flowers marked with purple.

For previous introduction see No. 76721.

80531. EUGENIA AQUEA Burm. f. Myrtaceae.

From Medan, Sumatra. Plants presented by J. A. Lörzing. Received July 7, 1928. Numbered in June, 1929.

A medium-sized tree, 20 to 30 feet high, native to the Molukka Islands, with smooth ovate-oblong evergreen leaves about 2 inches long, large white or red flowers in terminal or axillary cymes, and crimson to white ovoid edible fruits 1 to 2 inches long.

For previous introduction see No. 68026.

80532. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. **Avocado.**

From Waldo, Fla. Bud sticks presented by C. C. Shooter. Received May 31, 1929.

A tree about 50 feet high with an immense trunk. It survived the freeze in January, 1928, at which time the thermometer went to 15° F. at Gainesville, and the cold lasted several days. The tree, then in full bloom, lost its leaves for the first time, and the branches were cut back about one-third. The smaller seedling trees did not even lose their leaves when orange and grapefruit trees were frozen to the ground. It starts blooming in January and continues through until March, even if frost catches it, and has had as many as 1,000 fruits.

80533 to 80539.

From Tokyo, Japan. Seeds collected by P. H. Dorsett and W. J. Morse, Agricultural Explorers, Bureau of Plant Industry. Received May 31, 1929.

80533. ASTRAGALUS SINICUS L. Fabaceae.

No. 229. From the Tokyo Seed, Plant & Implement Co., Konon, May 6, 1929. A red-flowered variety quite common in the farming area about Tokyo, where it is said to be used for forage and green manure. It is a winter crop, being planted early in the fall, and was in full bloom about the first of May.

For previous introduction see No. 70969.

80534. MEDICAGO HISPIDA DENTICULATA (Willd.) Urban. Fabaceae. **Bur clover.**

No. 215. *Mokushika.* From the Yamato Seed Co., Takadacho, May 6, 1929. A clover said to be chiefly used for green manure and to some extent as a forage. It is also said to be different from the *Medicago denticulata* grown in the United States.

For previous introduction see No. 60562.

80533 to 80539—Continued.

80535. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 228. *Endo.* From the Tokyo Seed, Plant & Implement Co., Konon, May 6, 1929. A winter variety sown during the early fall in the Tokyo district. The pods are used as a green vegetable when the peas are just commencing to form, and later the peas are used.

80536 and 80537. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

80536. No. 134. From the Soy Sauce Laboratory, Imperial Experiment Station, Nishigahara, May 3, 1929. The seeds were originally grown in Manchuria. This sample is apparently mixed and may consist of several strains. It came from a lot used in the manufacture of soy sauce.

80537. No. 212. *Ryokuhi Daizu.* From the Yamato Seed Co., Takadocho, May 6, 1929. A small black-seeded variety said to be used especially as a green-manure crop.

80538 and 80539. VICIA FABA L. Fabaceae. **Broadbean.**

80538. No. 211. *Sora Mame.* From the Yamato Seed Co., Takadocho, May 6, 1929. A variety grown in the Tokyo district and southward. When full grown the beans are used after the manner of the green Lima bean. The dried beans are used in making candied beans by boiling in sirup and they are also roasted.

80539. No. 216. *Issum Sora Mame* (1-inch broad bean). From the Yamato Seed Co., Takadocho, May 6, 1929. A variety grown extensively for food in the Tokyo district and southward. It is planted during the fall. The beans are used especially in making candied beans by boiling in sirup.

80540. PERSEA SCHIEDEANA Nees. Lauraceae. **Coyo.**

From Tela, Honduras. Plants presented by Alfred F. Butler, Horticulturist, Research Department of the United Fruit Co. Received June 3, 1929.

This plant, known as *Yas* in Costa Rica and *Coyo* in Guatemala, occurs from southern Mexico to Panama. In Costa Rica it is found abundantly on the slopes of Irazu at altitudes between 4,000 and 6,000 feet. The fruits greatly resemble avocados. Up to the present the coyo has not shown much promise in Florida or California. It is somewhat slow of growth and probably will not bear until the trees are at least 8 or 10 years old. Efforts are being made to introduce the best seedling varieties from Guatemala and to propagate them by grafting. In this way it may be possible to encourage early fruiting and to have fruit of better quality than would be obtained from most seedlings.

For previous introduction see No. 52787.

80541. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Pasoroean, Java. Cuttings presented by Dr. V. J. Koningsberger, Proefstation voor der Java Suikerindustrie. Received June 6, 1929.

P. O. J. 1337.

80542 and 80543. CANNA EDULIS Ker. Cannaceae. **Edible canna.**

From Pointe à Pitre, Guadeloupe, French West Indies. Tubers presented by C. Holman B. Williams, Directeur, Station Agronomique. Received May 23, 1929.

A close relative of the ornamental cannas, cultivated for its edible tubers.

For previous introduction see No. 78852.

80542. *Jaune.* **80543.** *Rouge.*

80544 to 80549. ROSA spp. Rosaceae.

From Ottawa, Canada. Plants presented by W. T. Macoun, Dominion Horticulturist of the Central Experimental Farm. Received May 3, 1929.

80544 to 80547. ROSA HARISONII Rivers. **Harison's yellow rose.**

80544. *Antenor.* A moderate grower bearing double apricot-colored flowers which fade to cream.

80545. *Lucasia.* A moderate grower bearing large, single, cream-colored flowers.

80546. *Orinda.* A vigorous variety which keeps its foliage until late in the season and bears deep-cream semidouble flowers. Suckers are produced freely.

80547. *Silvander.* A moderate grower bearing single yellow flowers.

80548 and 80549. ROSA SPINOSISSIMA L. **Scotch rose.**

For previous introduction and description see No. 80289.

80548. A variety bearing large flowers.

80549. A strong-growing seedling of the Scotch rose which suckers freely and requires no pruning. The foliage is like a hybrid perpetual, and the flowers are very double, flat, and fragrant, but inclined to ball badly in wet weather.

80550. GREWIA OCCIDENTALIS L. Tiliaceae.

From Kirstenbosch, Newlands, near Cape Town, Union of South Africa. Seeds presented by R. H. Compton, Director of the National Botanic Gardens. Received May 24, 1929.

The younger parts of this evergreen shrub are covered with rusty tomentum. The dentate cordate leaves are 1 to 2 inches long, and the small flowers, in axillary or terminal cymes, are followed by purplish 4-lobed fruits the size of small peas. Native to Ethiopia and also the cape region.

For previous introduction see No. 51147.

80551. INODES MEXICANA (Mart.) Standl. (*Sabal mexicana* Mart.) Phoenicaceae. **Palmetto.**

From Georgetown, Demerara, British Guiana. Seeds presented by J. S. Dash, Director of the Department of Agriculture. Received June 5, 1929.

A tall palm up to 60 feet high, with palmate leaves divided into linear segments having numerous long threads on the margins. The inflorescence is short, dense, and recurved, and the fruits are flattened globose and black. It is native to Oaxaca, Mexico.

80552 and 80553. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.) Lauraceae. **Avocado.**

From Habana, Cuba. Bud wood obtained through Alfred F. Butler, Horticulturist, Research Department of the United Fruit Co., Tela, Honduras. Received June 6, 1929.

Large summer varieties of the Pollock type. The varieties were selected by Senator Menocal, Habana, Cuba, who named them *Wilson Popenoe* and *Raul Arango*. Unfortunately, during shipment to Tela, Honduras, the labels were lost, and it is therefore impossible to determine which is which.

80552 **80553**

80554. ULMUS JAPONICA Sarg. Ulmaceae. **Japanese elm.**

From Nikolsk-Ussuriisk, Maritime Province, Siberia, Union of Socialistic Soviet Republics. Seeds presented by the Director of the State Russian Geographical Society. Received June 6, 1929.

A large handsome hardy elm occasionally 90 feet high. Native to northeastern Asia.

For previous introduction see No. 76469.

80555. ARTOCARPUS COMMUNIS Forst. Moraceae. **Breadnut.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Agronomist in Charge of the Plant Introduction Gardens. Received June 10, 1929.

A form of the breadfruit in which the seeds are fully developed. These are about the size of chestnuts and are roasted and eaten.

80556 to 80565.

From Cape Town, Union of South Africa. Bulbs presented by W. S. Duke & Co. Received June 10, 1929.

80556. AGAPANTHUS sp. (*Abumon* sp.). Liliaceae.

A dwarf blue-flowered species.

80557 to 80559. ARUM spp. Araceae.

80557. ARUM sp.

A red-flowered species.

80558. ARUM sp.

A yellow-flowered species.

80559. ARUM sp.

A yellow-flowered seedling.

80560. GLADIOLUS sp. Iridaceae.

Painted Ladies.

80561. NERINE sp. Amaryllidaceae.

80562 to 80564. ORNITHOGALUM spp. Liliaceae.

80562. ORNITHOGALUM sp.

Chincherichee. A late-flowering species.

80563. ORNITHOGALUM sp.

Chincherichee. A yellow-flowered form.

80564. ORNITHOGALUM sp.

Chincherichee. A white-flowered form.

80556 to 80565—Continued.

80565. (Undetermined.)

Snowdrops.

80566. CHORDOSPARTIUM STEVENSONI Cheeseman. Fabaceae.

From South Island, New Zealand. Seeds presented by C. J. Reakes, Director General of the New Zealand Department of Agriculture, Wellington. Received June 4, 1929.

A leafless shrub or small tree up to 20 feet high, native to New Zealand, with long slender pendulous branches and racemes, 1 to 2 inches long, of small purple flowers.

For previous introduction see No. 77552.

80567 to 80570.

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received in May and June, 1929.

80567. FERONIA LIMONIA (L.) Swingle (*F. elephantum* Correa). Rutaceae. **Wood apple.**

Vilatti. A very graceful small thorny tree, native to India. The round fruits, about 2 inches in diameter, contain rather dry sweetish aromatic pulp, suitable for making jelly.

For previous introduction see No. 48626.

80568. ALBIZZIA LEBBEKOIDES (DC.) Benth. Mimosaceae.

A small feathery-topped ornamental tree which is very drought resistant. It is closely related to the well-known lebbeck tree, *Albizzia lebbek*, but has smaller and more numerous leaflets, smaller flowers, and broader pods. A native of the Philippine Islands.

80569. FICUS sp. Moraceae. **Fig.**

From Ilocos Norte. A large ornamental shiny green-leaved tree of weeping habit.

80570. RADERMACHERA sp. Bignoniaceae.

Growing in coral lime formation in Ilocos Norte. A tree bearing pale-mauve flowers which have yellowish markings on the throat.

80571 to 80574. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From the island of St. Helena. Seeds presented by H. Bruins Lich, Horticultural Officer of the Agriculture and Forestry Department. Received June 7, 1929.

80571. No. 1. *Large yellow.* Fruits clingstone with yellow skin and juicy yellow flesh of good flavor.

80572. No. 2. *Carrot.* Fruits freestone with pink skin and pink flesh of good flavor.

80573. No. 3. *Red center.* Fruits freestone with rosy skin and white and red flesh of good flavor.

80574. No. 4. *White.* Fruits freestone with creamy white skin and cream-colored flesh of fair flavor.

80575. ORNITHOGALUM LACTEUM Jacq. Liliaceae.

From Rosebank, near Cape Town, Union of South Africa. Bulbs purchased from Charles Ayres. Received June 10, 1929.

Chinchérichee Darling. A variety from Darling, a district about 80 miles from Cape Town. The flowers are white with yellowish centers. They begin blooming about the first of November and usually continue until about the first of December. This variety is only at its best from larger bulbs. Anything of pigeon-egg size or larger is considered good, and under cultivation the bulbs frequently increase to the size of a large hen's egg. It does not increase very freely, however, under cultivation, but can be reproduced very successfully from seed, the seedling bulbs flowering about the third season.

80576 to 80629.

From Tokyo, Japan. Collected by P. H. Dorsett and W. J. Morse, Agricultural Explorers, Bureau of Plant Industry. Received May 27, 1929.

80576 to 80582. BRASSICA spp. Brassicaceae.

Seeds from the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19 1929.

80576. BRASSICA sp.

No. 81. *Nagina, Takana.* A variety used as greens and also pickled with salt.

80577. BRASSICA sp.

No. 87. *San tou Sai,* variety *Makino.* A variety which does not form a head. It is used as a pickle when salted, and the young leaves are used as spinach.

80578. BRASSICA sp.

No. 88. *Tai Kai Shun Paku Sai* (large spring Chinese cabbage). A variety which forms a head and is used like ordinary cabbage.

80579. BRASSICA sp.

No. 89. *Katsuona* (Japanese bigstem mustard plant). A variety said to be used as a salted pickle and a green vegetable.

80580. BRASSICA sp.

No. 90. *Seppaku Taisai, Pak Choi* (Japanese whitestem cabbage). A variety which does not form a head. It is said to be used like the Chinese cabbage, and the young leaves are used like spinach. It is also pickled with salt.

80581. BRASSICA sp.

No. 92. *Kekkyu Hakusai* (improved spring white Chinese cabbage). Said to be used like the ordinary Chinese cabbage, *Pe tsai.*

80582. BRASSICA sp.

No. 93. *Uguisa Na, Komatsu Na* (Japanese green cabbage). Said to be used like spinach.

80583. CARICA PAPAYA L. Papayaceae. **Papaya.**

No. 104. Obtained from a fruit stand in Tokyo, where it had been shipped from Taiwan. The fruit shows a star-like arrangement in cross section which has not been previously noted in a papaya.

80576 to 80629—Continued.

80584 and 80585. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

Seeds from the Tokyo Seed, Plant, & Implement Co., Konon, Tokyo, April 19, 1929.

80584. No. 82. *Ka Ho Sui Ka.* Used as the ordinary squash.

80585. No. 91. *Rokoku Ogon Mitsu Suika* (Russian golden sweet watermelon). A variety used as the ordinary watermelon.

80586. COLOCASIA sp. Araceae.

No. 112. Tubers obtained in the market at Tokyo, April 23, 1929.

80587. COLOCASIA sp. Araceae.

No. 113. Corms obtained in the market at Tokyo, April 23, 1929.

80588 to 80591. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

Seeds from the Tokyo Seed, Plant, & Implement Co., Konon, Tokyo, April 19, 1929.

80588. No. 74. *Ginmakuwa* (Japanese muskmelon). A variety used as the ordinary muskmelon.

80589. No. 77. *Tokyo o Shirouri* (Japanese vegetable melon). Said to be used in making a salted pickle.

80590. No. 83. *Narukomakuwa.* Used as the ordinary muskmelon.

80591. No. 86. *Enaga Shinuri.* Said to be used in making salted pickles.

80592 to 80596. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

Seeds from the Tokyo Seed, Plant, & Implement Co., Konon, Tokyo, April 19, 1929.

80592. No. 75. *Kikuza Nankin, Kabocha.* Said to be used as the ordinary squash.

80593. No. 76. *Chirimeu Nankin* (large curled squash). Said to be used like the ordinary squash.

80594. No. 79. *Gokunase Godan We Sato Nankin, To Nasu* (earliest 50-pound sugar squash). Used as an ordinary cooked squash.

80595. No. 80. *Saikyo Nankin, Tonasu.* Used as an ordinary squash.

80596. No. 85. *Sousei Kurokawa Nankin* (earliest black-skinned Japanese squash). Said to be used as the ordinary squash.

80597 and 80598. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

Seeds from the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929.

80597. No. 78. *Shokudo Nozyu o* (table queen). A variety said to have sweet flesh. It keeps well in the winter after harvesting.

80598. No. 84. *Namasu Nankin* (Japanese salad squash). A new variety said to be used raw for salads.

80599. LILIUM sp. Liliaceae. **Lily.**

No. 96. Bulbs of a mountain lily from the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929. *Yama Yuri.* It is commonly known as

80576 to 80629—Continued.

mountain lily, cooking lily, and *Eizan lily.* Eizan is the name of a mountain where this lily grows abundantly. The stems are 5 to 6 feet high, the leaves broad and striped, and the flowers have a very strong odor and are generally white with the inside of the petals spotted dark red.

80600. FATSIA JAPONICA (Thunb.) Decaisne and Planch. Araliaceae.

No. 116. Seeds obtained at the Botanical Garden in Tokyo, April 23, 1929. This broad-leaved evergreen undershrub is extensively used here in most of the parks so far visited.

80601. IPOMOEA BATATAS (L.) Poir. Convolvulaceae. **Sweetpotato.**

No. 110. Tubers obtained in Tokyo, April 23, 1929. A rather long variety of good size and light pink on the outside.

80602. LACTUCA sp. Cichoriaceae. **Lettuce.**

No. 73. Seeds from the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929. *Ryuzetsu Sai* (alligator's tongue). A green-leaved vegetable generally used as a garnish and for salting down.

80603 to 80623. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

Nos. 80603 to 80608 were from Nishigahara, Tokyo, April 11, 1929.

80603. No. 3. *Sapporo Oingen.* A white-seeded variety of runner bean, originally from Hokushu, said to be used for boiling and making jam.

80604. No. 4. *Kintoki Uzura.* A red-seeded variety of runner bean said to be used for boiling and making jam.

80605. No. 5. *Ogon.* A light brown-seeded variety of bush bean, originally grown in Hokushu, said to be used for green beans.

80606. No. 6. *Goishi.* A black and white seeded variety of bush bean originally from Hokushu, said to be used as string beans.

80607. No. 7. *Usuki.* Originally grown in Kokushu. A cream-seeded variety of bush bean said to be used as green beans.

80608. No. 8. *Hoso Suzunari.* Originally grown in Hokushu. A white-seeded variety of the bush type with b'ack spots at each end of the seed scar; said to be used as string beans.

80609. No. 9. *Chunaga Uzura.* From the suburbs of Tokyo, April 11, 1929. A variety of the runner type cream colored mottled with red, said to be used as string beans. The dried beans are used baked.

80610. No. 10. *Kintoki Uzura.* From the suburbs of Tokyo, April 11, 1929. A red-seeded variety of the runner type, said to be used in making a sweet bean jam and used in confections.

80611. No. 11. From Nishigahara, Tokyo, April 11, 1929, originally grown in Hokushu. A variety of the runner type, cream colored mottled with red. This variety is

80576 to 80629—Continued.

said to be used as string beans and also dried.

80612. No. 12. *Isshaku Ingen.* From Nishigahara, Tokyo, April 11, 1929, and originally grown in Hokushu. A light brown-seeded variety of the runner type, said to be used as string beans.

80613. No. 44. *Ao o saya Shirofane, Shayaku gosum.* From the Imperial Seed Co., Takinogawa, Tokyo, April 15, 1929. A large white-seeded variety of the bush type, originally grown in the Tokyo district, and said to be used as string beans.

80614. No. 45. *Naga Kintoki Ingen.* From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally grown in the Tokyo district. A very dark red-seeded variety of the runner type, said to be the *Canadian Wonder.* It is used as string beans, and the dried beans are used in making sweet bean jam.

80615. No. 46. *Shakugo Sun Ingen.* From the Imperial Seed Co., Takinogawa, Tokyo, April 15, 1929. A light brown-seeded variety of the bush type originally grown in the Tokyo district, said to be used as string beans.

80616. No. 47. *Nagauzura Ingen.* From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, and originally grown in the Tokyo district. A cream-colored variety of the bush type mottled with red, used as string beans.

80617. No. 48. *Tsuruari Goku Naga Ingen.* From the Imperial Seed Co., Takinogawa, Tokyo, April 15, 1929. A long-podded runner bean with large flat cream-colored seeds mottled with black. It is said to be used as string beans.

80618. No. 49. *Otafuku Ingen.* From Nishigahara, Tokyo, April 15, 1929, and originally grown in the Tokyo district. A large white-seeded variety of the bush type said to be used as string beans. The dried beans are used as a dessert after cooking with sirup.

80619. No. 50. *Shiro Tsuro Ingen.* From Takadacho, Tokyo, April 15, 1929, originally grown in Hokushu. A white runner bean with large flat white seeds, said to be used in making all kinds of confections, such as sweet bean jam, etc.

80620. No. 51. *Yamato's Omaru Uzura Ingen.* From the Yamato Seed Co., Takadacho, Tokyo, April 15, 1929, originally grown in the Tokyo district. Seeds selected from the *Golden Carmine* by the Yamato Seed Co. A runner type said to be used as string beans and also in making a sweet jam called kinton.

80621. No. 52. *Gokuwase Fusanari Ingen.* From the Imperial Seed Co., Takinogawa, Tokyo, April 15, 1929, and originally grown in the Tokyo district. One of the earliest of the bunch beans for forcing in the greenhouse or hotbed. A light brown-seeded variety of the bush type said to be sown late in the fall in hotbeds or greenhouses.

80576 to 80629—Continued.

80622. No. 59. *Shima Uzura* (mottled garden bean). From Shibuya, Tokyo, April 19, 1929. A cream-seeded variety of the runner type mottled with red. It is used for green beans and also for making bean jam called kinton.

80623. No. 71. *Tora Maru Ingen* (round tiger bean). From Shibuya, Tokyo, April 19, 1929, originally grown in Hokushu. A mottled white variety of the bush type, said to be used as dried beans in making a sweet jam or paste.

80624. PISUM SATIVUM L. Fabaceae.
Pea.

No. 1. *Hiroshim Akabana Endo* (earliest garden pea). Seeds from Kagawa Mura, Saiki Gun, Hiroshima Ken, April 5, 1929. Said to be used as the garden pea.

80625. SOLANUM MELONGENA L. Solanaceae.
Eggplant.

No. 95. *Shinkoko o naga Nasu* (Chinese black snake eggplant). Seeds from the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929. Used as the ordinary eggplant.

80626 to 80628. SOLANUM TUBEROSUM L. Solanaceae.
Potato.

Tubers from Tokyo, April 23, 1929.

80626. No. 106. Variety *Early White.* The tubers are oblong, small, and of uniform size.

80627. No. 107. White potatoes obtained in the market at Tokyo, said to have been imported from Hokushu.

80628. No. 108. Tubers said to be the same as those sent in under No. 107 [No. 80627], but from another region.

80629. SPINACIA OLERACEA L. Chenopodiaceae.
Common spinach.

No. 94. *Nihon Norenso.* Seeds from the Tokyo Seed, Plant & Implement Co., Konon, Tokyo, April 19, 1929. Used as ordinary spinach.

80630. CLEMATIS GOURIANA Roxb. Ranunculaceae.

From Gladwyne, Pa. Plants presented by Mrs. J. Norman Henry. Received June 5, 1929.

For previous introduction and description see No. 80119.

80631 and 80632.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received June 5, 1929.

80631. MAXIMILIANEA VITIFOLIA (Willd.) Krug and Urb. (*Cochlospermum hibiscoides* Kunth). Cochlospermaceae.

A deciduous shrub or small tree, native to Central America, with grapelike leaves and large clusters of bright-yellow flowers sometimes 6 inches in diameter.

For previous introduction see No. 77168.

80631 and 80632—Continued.

80632. PRUNUS CAPULI Cav. Amygdalaceae. **Capulin.**

A tree, native to tropical America, up to 40 feet high, with lanceolate long-pointed coriaceous leaves 6 to 8 inches long and stout racemes 4 to 6 inches long of small white flowers which are followed by nearly black globose edible fruits half an inch in diameter.

For previous introduction see No. 77433.

80633 and 80634.

From Dampier Island, near New Guinea. Seeds presented by George J. Fritschel, Dubuque, Iowa. Received June 8, 1929.

80633. CORYPHA sp. Phoenicaceae. **Palm.**

A round-seeded, bushy, fan-leaved palm. In general this is a genus of very tall palms with stout spineless trunks.

80634. MUCUNA sp. Fabaceae.

A perennial leguminous climber.

80635. CITRUS sp. Rutaceae.

From Tres Amigos, San Carlos, Costa Rica. Seeds presented by Mrs. A. Bendus, through O. F. Cook, Bureau of Plant Industry. Received June 5, 1929.

Sweet lemon. A variety bearing almost continually very juicy, sweet fruits about the size of the Florida breakfast orange.

80636 and 80637.

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received June 10, 1929.

80636. CASSIA sp. Caesalpiniaceae.

From Abea. *Bulilising.* A handsome native flowering tree.

80637. STREBLUS ASPER Lour. Moraceae.

Aludig. A drought-resistant tree with drooping branches and dark-green foliage. It produces small yellowish rather sweet fruits somewhat resembling corn kernels in appearance. Native to tropical Asia.

80638. LAPAGERIA ROSEA Ruiz and Pav. Liliaceae. **Red Chile-bells.**

From Angol, Chile. Fruits presented by E. E. Reed, Instituto Agricola Bunster, through Julius G. Lay, Counselor of the American Embassy, Santiago, Chile. Received June 12, 1929.

For previous introduction and description see No. 80434.

80639 to 80642. TRITICUM spp. Poaceae.

From La Moncloa, Madrid, Spain. Seeds presented by Antonio Garcia Romero, Estación Central de Ensayo de Semillas. Received June 11, 1929.

80639 to 80641. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

80639. *Colorado de Alfaro.*

80640. *Portuguese No. 2048.*

80641. *Ruso No. 1.*

80642. TRITICUM DURUM Desf. **Durum wheat.**

Pinet.

80643. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Angol, Chile. Seeds presented by E. E. Reed, Instituto Agricola Bunster, through Julius G. Lay, Counselor of the American Embassy, Santiago, Chile. Received June 12, 1929.

A Chilean melon, 14 to 20 inches long and about half as much in diameter, with a yellow rind which is usually smooth, and yellow to orange flesh of very good flavor.

80644. SABINEA CARINALIS Griseb. Fabaceae.

From Dominica, British West Indies. Seeds presented by F. G. Harcourt, Curator and Agricultural Superintendent of the Dominican Agricultural Department. Received June 10, 1929.

A very fine flowering shrub or small tree, known locally as *Bois charibe*, which is considered one of the most showy of the native plants of Dominica. If planted on a dry, rocky hillside where it will be scorched by the sun for a period of three or four months each year it makes a marvelous display with its large scarlet flowers which are borne in clusters of three to five before the featherlike leaves appear.

80645 to 80648.

From Nogent sur Vernisson, Loiret, France. Seeds presented by L. Pardé, Directeur des Ecoles des Barres. Received June 5, 1929.

80645. BERBERIS REPLICATA W. W. Smith. Berberidaceae. **Barberry.**

An evergreen barberry, native to southwestern China, with rather small leaves which have recurved margins and are gray beneath. It is an early and profusely flowering species, bearing its blossoms all along the branches in a very attractive fashion, and the deep-crimson berries make it handsome in the fruiting stage.

For previous introduction see No. 63822.

80646. MALUS SIKKIMENSIS (Hook. f.) Koehne. Malaceae. **Sikkim crab.**

The Sikkim crab is a small tree, rather bushy in habit, which grows wild in the interior of Sikkim, India, at altitudes up to 10,000 feet. The narrowly oval leaves are very woolly beneath, and the white flowers, rosy in the bud, are about an inch across and are borne very freely in 4-flowered to 8-flowered clusters. The pear-shaped fruits are dark red with paler dots and are about half an inch wide.

For previous introduction see No. 62026.

80647. PIERIS TAIWANENSIS Hayata. Ericaceae.

An evergreen shrub or small tree, native to Taiwan, with oblong spatulate-serrulate leaves 2 to 5 inches long and small urceolate white flowers in terminal drooping panicles up to 6 inches long.

80648. ROSA FOETIDA Herrmann (*R. lutea* Mill.). Rosaceae. **Austrian brier rose.**

A hardy shrubby rose up to 10 feet high, with slender prickly stems and bright-yellow single flowers of characteristic scent. Native to western Asia.

For previous introduction see No. 78944.

80649. CITRUS VANGASAY Bojer. Rutaceae.

From near Tamatave, Madagascar. Seeds presented by the Station Agricole de l'Ivoloina, through Charles F. Swingle, Bureau of Plant Industry. Received May 31, 1929.

A shrub cultivated in the rural districts of Madagascar for the sake of its thick-skinned orangelike fruits which are flattened at both ends.

80650 to 80653.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, Agricultural Explorers, Bureau of Plant Industry. Received May 31, 1929.

80650. BRASSICA OLERACEA VIRIDIS L. Brassicaceae. **Kale.**

No. 213. *Hanahabotan* (ornamental cabbage flower). From the Yamato Seed Co., Takadacho, Tokyo, May 6, 1929. In Japan it is used as an ornamental, and is grown in pots or small dishes.

80651. CHRYSANTHEMUM CORONARIUM L. Asteraceae. **Crowndaisy.**

No. 219. *Shungiku.* From the Yamato Seed Co., Takadacho, Tokyo, May 6, 1929. This is said to be the edible chrysanthemum or vegetable chrysanthemum. The leaves are used as a garnish, flavoring, and also cooked as spinach.

80652. TAONABO JAPONICA (Thunb.) Szysz. (*Ternstroemia japonica* Thunb.). Theaceae.

No. 124. Obtained from trees in a small park on the road to the Samkaido Building, Tokyo, April 30, 1929. A small evergreen Japanese tree about 12 feet high, with a much branched head, leathery entire oblong leaves, and small yellowish-white fragrant flowers. The globose fruits, about the size of a cherry, are yellow tinged with rose on the sunny side. The smooth timber is used for cabinetwork and interior decorating, and the bark is used for dyeing. The plants are dioecious.

80653. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 133. From the Soy Sauce Laboratory of the Imperial Experiment Station, Nishigahara, Tokyo, May 3, 1929. This wheat, originally grown in the Tokyo district, is roasted, ground or coarsely cracked, mixed with boiled soybeans, and then rice bacteria are added in the making of soy sauce.

80654 to 80656.

From Darjiling, India. Seeds presented by J. E. Leslie, Curator, Lloyd Botanic Garden. Received June 7, 1929.

80654. GERBERA KUNZEANA Braun and Aschers. Asteraceae.

A herbaceous perennial with a rosette of ovate entire or pinnatifid leaves, woolly beneath, and scapes a foot high with filiform bracts, and bearing daisylike flower heads. It is native to the temperate slopes of the Himalayas in India.

For previous introduction see No. 39017.

80655. MAESA RUGOSA C. B. Clarke. Myrsinaceae.

A stout shrub or small tree, native to India at an altitude of 8,000 feet, with

80654 to 80656—Continued.

narrowly lanceolate coriaceous leaves 6 to 8 inches long and small white flowers borne in racemose panicles.

80656. RHODODENDRON CAMPANULATUM Don. Ericaceae.

A large evergreen shrub of stiff, spreading habit, sometimes 12 feet high, with oval leaves which are densely covered beneath with a red-brown felt. The flowers, of various rosy purple shades and about 2 inches across, are borne during April in rather loose clusters about 4 inches in diameter. It is native to India at an altitude of 13,000 feet.

For previous introduction see No. 75966.

80657. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Bamoa, Sinaloa, Mexico. Seeds obtained from Dr. A. W. Morrill, through C. E. Bellis, United States Plant Quarantine and Control Administration. Received June 13, 1929.

80658. PERSEA sp. Lauraceae.

From Chichavac, Guatemala. Seeds presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received June 17, 1929.

Aguacate de Monte. A species growing at an altitude of 9,000 feet.

80659 and 80660.

From Victoriaborg, Akkra, Gold Coast, Africa. Seeds and tubers presented by L. A. King-Church, Conservator of Forests. Received June 14, 1929.

80659. FIRMIANA BARTERI (Masters) Schum. (*Sterculia barteri* Masters). Sterculiaceae.

An ornamental tree, native to tropical Africa, with rounded cordate leaves and loose panicles of small coral-pink flowers. The wood is light and used for fishnets and floats, and the fiber is used for making rope.

For previous introduction see No. 73054.

80660. LISSOCHILUS sp. Orchidaceae. **Orchid.**

A terrestrial orchid.

80661 and 80662.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received June 11, 1929.

80661. CLEMATIS GOURIANA Roxb. Ranunculaceae.

For previous introduction and description see No. 80119.

80662. CITRUS WEBBERII Wester. Rutaceae. **Alsem.**

Kalpi. A small handsome tree, 15 to 30 feet high, which is very drought resistant. It is particularly abudant in the Mountain Province, Nueva Vizcaya, and southern Luzon. The better forms have oblate, very juicy acid fruits somewhat like the mandarin in appearance and up to 2½ inches in diameter; these may be used like the lemon. The species is very variable, and appears promising as a citrus stock.

For previous introduction see No. 62658.

80663. ORYZA SATIVA L. Poaceae. Rice.

From Howrah, Bengal, India. Seeds obtained from the Deputy Director of Agriculture, Western Circle, Calcutta, through R. Y. Jarvis, American Consul in Charge, Calcutta. Received June 14, 1929.

Patnai paddy.

80664 to 80667.

From Pretoria, Union of South Africa. Seeds obtained from E. Percy Phillips, Principal Botanist, Botanical Station, Division of Plant Industry, Department of Agriculture. Received June 15, 1929.

80664. ACACIA ALBIDA Delile. Mimosaceae.

A low much-branched tree, native to tropical Africa, with whitish bark, axillary spikes of white flowers, and flat oblong pods. It yields a gum similar to gum arabic. The leaves are eaten by goats, and the bark is used in curing leather.

For previous introduction see No. 55419.

80665. ACACIA LASIOPETALA Oliver. Mimosaceae.

A shrub or small tree with the young growing parts softly tomentose. The compound leaves are divided into 14 to 22 pairs of pinnæ, each with 20 to 30 pairs of leaflets. The small flowers, with silky petals, are in small heads on axiliary penduncles 1 to 2 inches long. Native to the Mozambique district of southeastern Africa.

80666. BOLUSANTHUS SPECIOSUS (Bolus) Harms (*Lonchocarpus speciosus* Bolus). Fabaceae.

A small ornamental tree native to South Africa, with compound leaves and long racemes of violet flowers resembling those of wisteria. The tree is subtropical in its requirements, grows best in good deep soil, and is propagated only by seeds. The hard white durable timber is used for wheel spokes.

For previous introduction see No. 76860.

80667. PALLASIA CAPENSIS Christm. (*Calodendrum capensis* Thunb.). Rutaceae.

A large handsome tree with spreading branches in pairs or in threes. The ovate evergreen opposite leaves are 3 to 4 inches long. The white flowers, with linear-oblong reflexed petals 1 to 2 inches long, are in terminal panicles, and the shining black seeds the size of hazelnuts are borne in hard thick capsules. It is native to South Africa.

80668. VIROLA sp. Myristicaceae.

From Aguna, Guatemala. Seeds presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received June 17, 1929.

Collected at an altitude of 1,400 feet. A large tree, 50 to 100 feet tall, native to tropical America. The seeds, resembling nutmegs, are rich in oil which is of evident value for making soap.

80669. ARGANIA SPINOSA (L.) Skeels (*A. sideroxylon* Roem. and Schult.). Sapotaceae. Argan.

From Mogador, Morocco. Seeds obtained from Mr. Besson, Inspecteur des Eaux et Forêts. Received June 17, 1929.

The argan tree of western Morocco is very limited in its range, occurring only in that part of the African Continent. It grows to a large size and bears an abundance of light-yellow fruits somewhat resembling small plums in shape. Cattle and goats are said to feed upon these fruits, which are exceedingly acrid to the taste. The seeds are very thick-walled and contain an oil which is used as food and also for illuminating purposes. Apparently the tree is not injured by considerable frost, and it may thrive wherever the hardy citrus grows.

For previous introduction see No. 65467.

80670 and 80671.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, Agricultural Explorers, Bureau of Plant Industry. Received June 15, 1929.

80670. SCOPOLINA JAPONICA (Maxim.) Kuntze. Solanaceae.

No. 175. Obtained from Dr. Eishcro Wakabayashi, Chief Officer of the Experimental Farm for Cultivation of Medicinal Plants, Kasukabecho, Saitama Ken, May 15, 1929. Doctor Wakabayashi states that the roots, branches, leaves, and flowers are used in nervous troubles.

For previous introduction see No. 32258.

80671. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

No. 251. *Sode Furi Daidzu.* From Tokyo, May 15, 1929. A greenish-yellow, medium-large soybean generally used for bean curd, soy sauce, and in cooking.

80672 and 80673. GUNDELIA TOURNEFORTII L. Asteraceae.

From Kurdistan, Turkey. Seeds presented by George E. Lamsa, Mission House, New York, N. Y. Received June, 1929.

A perennial herb much resembling a thistle, with milky juice and spiny many-lobed leaves and flower heads which produce seeds somewhat like those of the sunflower, *Helianthus annuus.* It is native to Kurdistan and Persia, where the young shoots are eaten as a vegetable. The seeds are also eaten.

For previous introduction see No. 51142.

80672. From northwestern Kurdistan.

80673. From southeastern Kurdistan.

80674 and 80675. BRASSICA RUGOSA (Roxb.) Prain. Brassicaceae.

From Java. Seeds collected by W. A. Wiren and presented by P. J. Wester, Bureau of Agriculture, Manila. Received June 27, 1929.

A vegetable extensively grown in India and Java. It is an early cold-weather crop in the hills of the central, eastern, and western Himalayas. The permanent radical leaves form a loose cabbagelike head a foot in diameter. Later a stout stem, 4 to 6 feet high, is formed, its

80674 and 80675—Continued.

branches ascending to make a narrow pyramidal head 6 to 10 inches across. The succulent leaves, 12 to 15 inches long and 8 to 9 inches wide, taper into thick white fleshy stalks 3 to 4 inches long and over an inch wide. The plant is cultivated in Nepal where its leaves are picked almost as fast as they are developed and are used as a vegetable. An oil is extracted from the seeds.

For previous introduction see No. 53542.

80674. *Sesawi idjo.*

80675. *Sesawi puti.*

80676. CASSIA sp. Caesalpiniaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received June 27, 1929.

A small tree, about 20 feet high, which reminds one of *Sesbania grandiflora.*

80677. ANACARDIUM OCCIDENTALE L. Anacardiaceae. **Cashew.**

From Tananarive, Madagascar. Seeds obtained from Paul Dean Thompson, American Vice Consul. Received July 26, 1928. Numbered in June, 1929.

A tropical evergreen tree, 30 to 40 feet high, with large leathery leaves. It is native to the West Indies. The small kidney-shaped nuts are borne on large swollen, pear-shaped, juicy, acidulous stalks, 2 to 4 inches long, which are preserved. The edible seeds are roasted and served as a dessert and are now becoming well-known in the markets of the eastern United States, along with other salted nuts.

For previous introduction see No. 52582.

80678. EXOECARIA BICOLOR (Hassk.) Zoll. Euphorbiaceae.

From Singapore, Straits Settlements. Plants collected by David Fairchild, Agricultural Explorer, Bureau of Plant Industry, with the Allison V. Armour Expedition. Received July 19, 1926. Numbered in June, 1929.

No. 822. Botanic Gardens, May 31, 1926. A handsome shrub with leaves glossy green above and wine-red on the under surface.

80679 and 80680.

From Mountain Province, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received June 24, 1929.

80679. RUBUS COPELANDII Merr. Rosaceae.

A robust bramble with ascending arching spiny canes 10 feet long. It is native to the Philippine Islands at altitudes between 5,000 and 8,000 feet. The leaves are trifoliolate, and the orange-red berries are juicy and edible, but lacking in flavor.

For previous introduction see No. 76797.

80680. VACCINIUM BARANDANUM Vidal. Vacciniaceae.

A shrub or small tree, 12 to 30 feet high, native to the island of Luzon. It has coriaceous undulate-margined leaves 4 to 6 inches long and campanulate red flowers nearly an inch long in axillary racemes. It is found at altitudes between 4,000 and 7,000 feet.

80681 to 80709.

From Guatemala. Seeds presented by Wilson Popenoe, Research Department of the United Fruit Co., Tela, Honduras. Received June 20, 1929.

80681. ACACIA sp. Mimosaceae.

Obtained at Chichavac at an altitude of 8,300 feet.

80682. APEIBA ASPERA Aubl. Tiliaceae.

Peine de mico. Obtained at Caballo Blanco at an altitude of 250 feet. A large handsome tree 40 feet high, with grayish bark, oval smooth green leaves 5 inches long, and terminal racemes of yellow flowers. Native to tropical South America.

80683. CALOCARPUM VIRIDE Pittier. Sapotoceae. **Green sapote.**

Injerto. Obtained in the market in the city of Guatemala. A tree, native to Guatemala, which, unlike its near relative, the sapote (*Lucuma mammosa*), grows at an altitude of 5,000 to 6,000 feet. It is about 40 feet high, with long, slender leaves and commonly round to oval fruits often pointed at the tip. The fruits are 2 to 3½ inches in diameter, smooth, dull yellow-green, sometimes becoming almost dull yellow. The skin is not thick and adheres closely to the red-brown flesh, which is soft and melting with a sweet flavor. The one or two large deep-brown seeds are hard and polished and are easily removed from the pulp.

For previous introduction see No. 43788.

80684. CALOPHYLLUM INOPHYLLUM L. Clusiaceae.

A large tree with leaves like those of a magnolia and producing fruits about an inch in diameter. A bitter, aromatic greenish oil is extracted from the seeds and used for burning by the poorer classes and is also used as an application in rheumatism. The green oil, on saponification, yields a bright-yellow soap. The strong durable reddish wood is useful for the joiner and cabinetmaker, and in India it is used for masts, railway sleepers, etc.

For previous introduction see No. 52595.

80685. CEDRELA sp. Meliaceae.

Obtained in Monte Grande at an altitude of 600 feet.

80686. CHAMAEDOREA sp. Phoenicaceae. **Palm.**

Pacaya. Obtained in Aguna at an altitude of 1,400 feet.

80687. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

Sandia. Obtained in Monte Grande at an altitude of 600 feet.

80688. CRATAEGUS STIPULOSA (H. B. K.) Steud. Malaceae. **Manzanilla.**

From Chichavac, at an altitude of 8,100 feet. A large shrub or small erect slender tree about 20 feet tall, with elliptic-lanceolate serrate leaves and bearing in the spring white flowers resembling apple blossoms. The subglobose fruits, about an inch in diameter, look like small apples and are yellow with russet dots and a blushed cheek. The thin skin surrounds a rather dry, yellowish, mealy pulp and three large seeds.

80681 to 80709—Continued.

In the early fall, commencing about October, the fruits ripen, and from this month until after Christmas they are quite abundant.

For previous introduction see No. 73755.

80689. DAHLIA MAXONII Safford. Asteraceae.

Flor de Santa Catarina. From Xetzac, near Tecpam, at 6,500 feet altitude. A tree dahlia, native to Guatemala, where it becomes about 15 feet high and bears clusters of large lilac-pink flowers. A detailed description of this tree dahlia with a discussion of its horticultural possibilities is given in the Journal of Heredity, vol. 11, pp. 265 to 268, 1920.

For previous introduction see No. 73687.

80690. ENTEROLOBIUM CYCLOCARPUM (Jacq.) Griseb. Mimosaceae.

Conacaste. From Escuintla. One of the most beautiful and largest trees of the Pacific region of tropical America, where it grows at an altitude of about 2,700 feet. The trunk sometimes becomes 3 feet in diameter. The compound leaves close up during the night, and the pods are twisted into a short spiral. The leaves and pods are much relished by cattle.

For previous introduction see No. 51406.

80691. GLIRICIDIA SEPIUM (Jacq.) Kunth (*G. maculata* H. B. K.). Fabaceae.

Madre Cacao. From Monte Grande, at an altitude of about 600 feet.

80692. HONCKENYA FICIFOLIA Willd. Tiliaceae.

From Lancetilla. A very striking ornamental shrub native to western tropical Africa. The branches are purplish and covered with yellowish hairs. The hairy leaves are more or less deeply 3-lobed to 7-lobed, and the large purple flowers, 2 to 4 inches wide, are in terminal racemes.

For previous introduction see No. 73513.

80693. LUEHEA SEEMANNII Planch. and Triana. Tiliaceae.

Tapisquit. A tropical tree with alternate oblong-elliptic irregularly serrulate leaves and rather small white or pink flowers in terminal cymes. Native to Colombia.

80694. PARMENTIERA EDULIS DC. Bignoniaceae.

Guajilote. A small tree up to 30 feet high, with the branches armed with short stout recurved spines. The trifoliolate leaves have three ovate entire leaflets, the greenish yellow flowers are in clusters on the old wood, and the edible yellowish green fruits are 4 to 6 inches long and about an inch in diameter. Native to Mexico, Guatemala, and El Salvador.

80695. PHASEOLUS sp. Fabaceae.

Choreque. From Monte Grande, at an altitude of about 600 feet.

80696. PHYLLOCARPUS SEPTENTRIONALIS Donn. Smith. Caesalpiniaceae.

Flor de Mico. A handsome flowering tree native to eastern Guatemala at altitudes between 1,500 and 2,000 feet. It is

80681 to 80709—Continued.

of broad spreading habit, 40 to 50 feet high, with small light-green compound leaves and clusters of small crimson-scarlet flowers borne in great profusion during January and February.

For previous introduction see No. 59768.

80697. PINUS OOCARPA Scheide. Pinaceae. **Pine.**

A white pine from Concepción, Chiquimula, at an altitude of 1,800 feet.

For previous introduction see No. 50651.

80698. PLATYMISCIUM POLYSTACHYUM Benth. Fabaceae.

Hormigo, Palo de Marimba. From Monte Grande, at an altitude of 600 feet. A handsome tropical leguminous tree with opposite, shining-green, compound leaves made up of three to five ovate leaflets and racemes of small flowers. The wood is hard, streaked black and red, and is considered excellent for cabinetwork.

80699. SENECIO SALIGNUS DC. Asteraceae.

Chilca. From Xetzac, Tecpam, at an altitude of 6,500 feet. A glabrous shrub 4 to 8 feet high, native to Mexico and Guatemala. The narrowly lanceolate sessile leaves are 1 to 5 inches long, and the bright-yellow daisylike flowers are borne in a terminal cyme.

80700 and 80701. SICANA ODORIFERA (Vell.) Naud. Cucurbitaceae. **Casabanana.**

Melocotón. A subtropical ornamental cucurbitaceous vine producing large fruits a foot or more long, which are edible but insipid.

For previous introduction see No. 72986.

80700. From Monte Grande at an altitude of 600 feet.

80701. From the market in Sololá.

80702. SIDEROXYLON TEMPISQUE Pittier. Sapotaceae.

Tempisque. From the market in the city of Guatemala, and probably originating in Antigua. A large tree, glabrous throughout, native to El Salvador and Guatemala. The coriaceous elliptical leaves are 2 to 4 inches long on long petioles; the small greenish-yellow flowers are in dense clusters on the old wood and are followed by ovoid 1-seeded fruits 1 to 2 inches long.

80703. STERCULIA sp. Sterculiaceae.

Castano. From Santa Cruz.

80704. SYMPHONIA GLOBULIFERA L. f. Clusiaceae.

Leche Amarilla. A large tropical tree up to 80 feet high, with oblong-lanceolate short-stemmed leathery leaves and red flowers, either solitary or in many-flowered umbels. Native to tropical Africa and also tropical America.

80705 to 80707. TABEBUIA spp. Bignoniaceae.

80705. TABEBUIA DONNELL-SMITHII Rose.

Matilisguate. From Monte Grande, at an altitude of 600 feet. A tree up to 80 feet high, with a trunk often 4 feet in diameter, native to Guatemala. The palmately compound evergreen leaves are made up of five to

80681 to 80709—Continued.

seven serrate-ovate leaflets 8 to 10 inches long, and the panicles of beautiful golden-yellow tubular-campanulate flowers are borne in great profusion.

80706. TABEBUIA PENTAPHYLLA (L.) Hemsl.

Roble. From Monte Grande, at an altitude of 600 feet. A handsome tropical deciduous tree, about 35 feet high, native to Central America. During its flowering period, from January to March, the numerous large clusters of pink flowers make the tree very attractive.

For previous introduction see No. 73286.

80707. TABEBUIA sp.

Cortez. From Monte Grande, at an altitude of 600 feet.

80708. TRIBROMA BICOLOR (Humb. and Bonpl.) O. F. Cook (*Theobroma bicolor* Humb. and Bonpl.). Sterculiaceae.

Cacao pataste. From the market of Sololá.

80709. TRIPLARIS AMERICANA L. Polygonaceae.

Mulato. From Caballo Blanco, at an altitude of 265 feet. A large tropical timber tree with curious 3-angled woody fruits. Native to Central America.

For previous introduction see No. 73287.

80710 to 80712. ZEA MAYS L. Poaceae. **Corn.**

From Soochow, Kiangsu, China. Seeds presented by H. L. Reaves, American Presbyterian Mission, South. Received June 25, 1929.

80710. Changshu soft corn.

80711. No. 1. 80712. No. 2.

80713 to 80717.

From Nikolsk-Ussuriisk, Maritime Province, Siberia, Union of Socialistic Soviet Republics. Seeds presented by the Director of the State Russian Geographical Society. Received June 10, 1929.

80713. FRAGARIA ORIENTALIS A. Los. Rosaceae. **Strawberry.**

A wild strawberry, native to northern Chosen, with erect hairy stems up to 8 inches high, broad coarsely serrate hairy leaflets, and small red conical or spheroidal fruits.

80714. LONICERA MAXIMOWICZII Maxim. Caprifoliaceae. **Honeysuckle.**

An ornamental shrub up to 10 feet high, with purplish branchlets, ovate leaves 1 to 3 inches long, smooth and dark green above, lighter and pubescent below, and violet-red flowers produced in pairs, followed by red fruits. It is native to the Amur region of Siberia.

80715. SAMBUCUS LATIPINNA Nakai. Caprifoliaceae. **Elder.**

A low shrub with compound leaves made up of three to five broadly elliptic leaflets, and hemispheric clusters of small white flowers followed by scarlet or orange-red fruits. Native to Chosen.

80713 to 80717—Continued.

80716. SAMBUCUS RACEMOSA L. Caprifoliaceae.

Variety *Buergeriana.* Received as *Sambucus buergeriana* Blume, which appears to be a herbarium name that has not been published.

80717. SYRINGA WOLFI C. Schneid. (*S. robusta* Nakai). Oleaceae. **Lilac.**

An ornamental shrub remarkable for its peculiar foliage; the elliptic oblong leaves are up to 6 inches long, cuneate, and grayish green beneath. The fragrant, dark-lilac flowers are in much-branched panicles. Native to Manchuria and Chosen.

80718 to 80725. AVENA spp. Poaceae. **Oats.**

From Cowra, New South Wales, Australia. Seeds presented by J. T. Pridham, Experimental Farm, through T. R. Stanton, Bureau of Plant Industry. Received June 27, 1929.

80718. AVENA sp.

Belar.

80719. AVENA sp.

Gidgee.

80720. AVENA sp.

Guyra.

80721. AVENA sp.

Palestine.

80722. AVENA sp.

No. 4385–C. (*Red Sprig* × *Sunrise*) × *Reid.*

80723. AVENA sp.

No. 4386–C. (*Red Sprig* × *Sunrise*) × *Reid.*

80724. AVENA sp.

No. 4387–C. (*Red Sprig* × *Sunrise*) × *Reid.*

80725. AVENA sp.

No. 4865–C. (*Sunrise* × *Reid*) × *Lachlan.*

80726 to 80759. TRITICUM spp. Poaceae.

From Afghanistan. Seeds collected by Prof. N. I. Vavilov, Institute of Applied Botany and New Cultures, Leningrad. Received June 27, 1929.

80726 to 80756. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

80726. No. 12353. A spring wheat.

80727. No. 12369. Mixture of spring and winter wheat.

80728. No. 12370. Spring wheat from nonirrigated fields.

80729. No. 12391. From the vicinity of Gherat, Shankhai, at an altitude of about 3,600 feet. Bearded pubescent spring wheat.

80730. No. 12481. From Akhalgaran, at an altitude of about 7,800 feet. Mixture of spring and winter wheat.

80731. No. 12482. From Shakharab, at an altitude of about 8,250 feet. Inflatum forms of spring wheat for irrigated fields.

80726 to 80759—Continued.

80732. No. 12483. *Triticum compactum.* From Daulet, at an altitude of about 7,800 feet. Spring wheat.

80733. No. 12486. From Piandzhau, at an altitude of about 9,000 feet. Semibearded spring wheat for irrigated fields.

80734. No. 12491. *Triticum compactum.* From Kabul District, at an altitude of about 6,000 feet. Mixture of winter and spring wheat.

80735. No. 12587. From Khadzhi-Durbar, at an altitude of about 3,300 feet. Spring wheat for nonirrigated fields.

80736. No. 12611. From Masar and Sheriff, at an altitude of about 1,500 feet. Mixture of spring and winter wheat for nonirrigated fields.

80737. No. 12621. From Sukhte-Tchinar, at an altitude of about 8,700 feet. Winter wheat for irrigated fields.

80738. No. 12629. *Triticum compactum.* From Navi, at an altitude of about 7,000 feet. Winter wheat.

80739. No. 12636. From Tcharikar, at an altitude of about 5,700 feet. Mixture of spring and winter wheat for irrigated fields.

80740. No. 12657. *Speltiforme.* From Du Ab, at an altitude of about 6,600 feet. Spring wheat for nonirrigated fields.

80741. No. 12667. From Masar and Sheriff, at an altitude of about 1,500 feet. Mixture of spring and winter wheat for nonirrigated fields.

80742. No. 12668. From Masar and Sheriff, at an altitude of about 1,500 feet. Winter wheat for nonirrigated fields.

80743. No. 12669. *Triticum compactum.* From Masar and Sheriff, at an altitude of about 1,500 feet. Spring wheat for nonirrigated fields.

80744. No. 12687. From Kabul District, at an altitude of about 5,700 feet. Winter wheat.

80745. No. 12715. *Triticum compactum.* From Sheikhabad, Kandagar Road, at an altitude of about 6,300 feet. Winter wheat.

80746. No. 12721. From Kabul District, at an altitude of about 5,700 feet.

80747. No. 12722. From Kabul District, at an altitude of about 5,700 feet.

80748. No. 12749. From Kabul District. Inflatum type of a beardless wheat, harvested in 1924, obtained from a German orchardist.

80749. No. 12768. From Kandagar, along the Argendabu River, at an altitude of about 3,000 feet. Mixture of spring and winter wheat. Winter wheat for irrigated fields.

80750. No. 12772. From Darvagi. Mixture of spring and winter wheat. Winter wheat for irrigated fields.

80751. No. 12841. From Mashet District, vicinity of Faisabad, at an altitude of about 4,200 feet. Spring wheat.

80726 to 80759—Continued.

80752. No. 12842. From Argu, at an altitude of about 5,700 feet. Spring wheat for nonirrigated fields.

80753. No. 12846. South of Faisabad, at an altitude of about 3,800 feet. Winter wheat for irrigated fields. Great admixture of rye.

80754. No. 12850. From Dzhurum, Badakhshan, at an altitude of about 4,400 feet. Spring wheat for nonirrigated fields.

80755. No. 12857. From Dan, at an altitude of about 8,400 feet. Spring wheat, liguleless, for irrigated fields.

80756. No. 12874. From Tchekhosarai, at an altitude of about 4,500 feet. Mixture of winter and spring wheat. Winter wheat for irrigated fields.

80757 to 80759. TRITICUM TURGIDUM L. **Poulard wheat.**

80757. No. 12379. From Gherat, Bazaar, at an altitude of about 2,800 feet. Mixture of spring and winter wheat.

80758. No. 12385. *Triticum compactum.* East of Gherat, at an altitude of about 3,600 feet. Admixture of black-eared forms. Mixture of spring and winter wheat.

80759. No. 12489. *Triticum compactum.* Between Seri-Tcheshme and Koti-Ashrou, at an altitude of about 8,400 feet. Winter wheat with an admixture of beardless wheat.

80760. AVENA sp. Poaceae. **Oats.**

From Cowra, New South Wales, Australia. Seeds presented by J. T. Pridham, Experimental Farm, through T. R. Stanton, Bureau of Plant Industry. Received March 21, 1929.

Kareela C. 28.

80761 to 80768.

From Georgetown, Demerara, British Guiana. Seeds presented by J. S. Dash, Director of the Department of Agriculture. Received June 5, 1929.

80761. ACROCOMIA VINIFERA Oerst. Phoenicaceae. **Palm.**

A palm 40 feet high, native to Central America, with a spiny ringed trunk, large arching pinnate leaves with numerous linear pinnae, and a spathe about 3 feet high. It is closely related to *Acrocomia lasiospatha.*

80762. ASTROCARYUM AUREUM Gris. and Wendl. Phoenicaceae. **Palm.**

A palm, closely related to Elaeis, with a prickly trunk and pinnately divided leaves of linear-lanceolate segments, shining above and greenish-golden beneath. It is native to Trinidad.

80763. EUTERPE VENTRICOSA C. H. Wright. Phoenicaceae. **Palm.**

An erect slender spineless pinnate-leaved palm, 20 to 30 feet high, with oblong-lanceolate pinnæ about 2 feet long, a much-branched spadix, small white flowers, and brown pealike fruits one-fourth of an inch in diameter. It is native to tropical South America.

80761 to 80768—Continued.

80764. LICUALA ELEGANS Blume. Phoenicaceae. Palm.

A fan palm, native to Sumatra, with a short thick trunk about 4 feet high and a crown of orbicular leaves on petioles 3 to 5 feet long, having linear-lanceolate lobes obliquely truncate at the end.

80765. LINOMA ALBA (Bory) O. F. Cook. Phoenicaceae. Palm.

Variety *aurea*.

80766. LIVISTONA OLIVAEFORMIS Mart. Phoenicaceae. Palm.

A fan palm, native to Brazil, with a medium-sized trunk, leaves on petioles spiny at the base, and the segments divided into long linear pendent lobes 12 to 15 inches long and solitary olive-shaped fruits.

For previous introduction see No. 79570.

80767. ENGLEROPHOENIX sp. (*Maximiliana* sp.). Phoenicaceae. Palm.

Tall spineless palms with pinnately divided leaves, related to the Attaleas.

80768. ROYSTONEA REGIA (H. B. K.) O. F. Cook (*Oreodoxa regia* H. B. K.). Phoenicaceae. Royal palm.

Variety *jenmani*.

80769 to 80772.

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received June 27, 1929.

80769. ACACIA sp. Mimosaceae.

From Ilocos Norte. A tall shrub with long slender branches, growing on dry sandy soil in a region where the dry season is long.

80770. FLACOURTIA RUKAM Zoll. and Mor. Flacourtiaceae.

From Manila.

For previous introduction and description see No. 80120.

80771. PROSOPIS CHILENSIS (Molina) Stuntz (*P. juliflora* DC.). Mimosaceae. Algaroba.

From Laoag, Ilocos Norte. A spineless form.

For previous introduction see No. 50094.

80772. VIGNA LUTEA (Swartz) A. Gray (*V. retusa* Walp.). Fabaceae.

A tropical perennial vine or creeper, native to the Philippines, where it has been found useful as a cover crop. It has also made good forage for cattle.

For previous introduction see No. 74587.

80773. SOCRATEA EXORRHIZA (Mart.) Wendl. (*Iriartea exorrhiza* Mart.). Phoenicaceae. Palm.

From Paramaribo, Dutch Guiana. Seeds presented by S. Sahal, Director of the Agricultural Experiment Station. Received June 28, 1929.

A tall handsome spineless palm, native to tropical South America, bearing small yellow flowers and olive-green fruits. It has a swollen cylindrical trunk elevated on a pyramid of exposed roots, giving it a remarkable appearance. The trunk, 35 feet or more high, bears at its summit a crown of large, irregularly pinnate leaves.

For previous introduction see No. 59279.

80774. KENTIA sp. Phoenicaceae. Palm.

From Trinidad, British West Indies. Seeds collected by Allison V. Armour. Received April 10, 1929.

Trinidad Botanic Gardens. The kentias are ornamental spineless palms with pinnate leaves composed of linear-lanceolate leaflets. They are closely related to the betel palm, *Areca catechu*.

80775 to 80779. GOSSYPIUM spp. Malvaceae. Cotton.

From Paramaribo, Dutch Guiana. Seeds presented by S. Sahal, Director of the Agricultural Experiment Station. Received June 28, 1929.

Seeds collected on cotton trees by the Carib Indians of Torelinde and Bisri, south of Paramaribo.

80775. GOSSYPIUM sp.

Amana Ma ulu.

80776. GOSSYPIUM sp.

Ateriri Ma ulu.

80777. GOSSYPIUM sp.

Ma ulu ne, Kumbo enulu.

80778. GOSSYPIUM sp.

Parana Ma ulu.

80779. GOSSYPIUM sp.

Tapulu Ma ulu.

80780 to 80809. PHOENIX DACTYLIFERA L. Phoenicaceae. Date palm.

From Iraq. Offshoots obtained by Roy W. Nixon, Bureau of Plant Industry, United States Department of Agriculture. Received May 2, 1929.

80780. *Allona*. A medium to small, amber-colored date, resembling somewhat, both in appearance and in quality, the *Amir Haj* [No. 80781], of which it may be a seedling. It occurs only in the Oasis of Mandali, where there are probably fewer than 100 palms.

80781. *Amir Haj*. A variety perhaps the most famous in northern Iraq; known to the United States Department of Agriculture by reputation for 30 years. The fruit is medium-sized, oblong, deep amber, very translucent, with light bloom, thin skin, and rich flavor. The variety is rated by the natives as being a good producer. There is some shipment of fruit to other points in Iraq, but chiefly as gifts or special orders, for it is highly esteemed. It occurs only in the Oasis of Mandali, where there are probably several thousand palms, although any one garden seldom has more than a few specimens.

80782. *Ashrasi*. Obtained at Mandali. A medium to large, ovate, amber-colored date intermediate between the soft and the dry types, possessing many desirable qualities of both. The few specimens of this variety already growing

80780 to 80809—Continued.

in the Coachella Valley of California have attracted attention on the one hand because of the excellence of the fruit and on the other because the flower clusters have seldom set many fruits. From investigations in Iraq it appears that this handicap is diminished by planting on heavy soil and pollinating very promptly after the flowers open. The variety is well known and widely distributed in Iraq, but was not found in abundance except at Mandali.

80783. *Azrakani.* Obtained at Mandali. A medium to small-sized, amber-colored date somewhat similar to *Allona* [No. 80780], and also very likely a seedling of *Amir Haj* [No. 80781]. A rare variety found chiefly at Mandali.

80784. *Badami.* Obtained at Mandali. An inferior variety, probably a seedling of *Zaheedy,* to which the fruit has some resemblance, though oblong rather than obovate.

80785. *Bahrab.* Obtained at Mandali. A variety fairly well known north and east of Baghdad, but nowhere very abundant. It is a long, narrow, amber-colored date of good flavor, resembling the *Okt Fteemy* variety from North Africa. It cures well and is said to be one of the earliest ripening varieties in northern Iraq.

80786. *Bairukdar.* Obtained at Mandali. A medium to large-sized amber-colored date of fair quality local to Mandali.

80787. *Banawish.* Obtained at Mandali.

80788. *Barhi.* Obtained near Basra. An ovate amber date of excellent quality, already known from a few specimens growing in the Coachella Valley of California. It is found chiefly in southern Iraq, where it is rare but well known and highly esteemed. It is one of the few varieties which are sweet in the "khalal" stage—the period immediately preceding the softening which accompanies complete maturity.

80789 and 80790. *Bedraya.* Probably the best dry date in Iraq. The fruit is medium to large, oblong, straw colored, and mild flavored. The variety is well known in northern Iraq. It was not found in large numbers in any of the localities visited, but was said to be more abundant in Bedra, the oasis of its origin.

80789. Obtained at Mandali.

80790. Obtained from the Oasis of Bedra through the courtesy of J. F. Webster, Inspector General of Agriculture in Iraq.

80791. *Braim.* Obtained at Basra. A medium-sized oblong amber date common on the Shaat Al Arab. Almost the entire crop in southern Iraq is harvested in the "khalal" or prepipe stage, boiled, dried and exported to other parts of Iraq and to India, Persia, and Arabia.

80792. *Dairi.* Obtained at Basra. A common variety in southern Iraq, said to be almost on a par with *Sayer* [No. 80808] in its resistance to adverse conditions. The purplish-brown fruit is medium to large, oblong-elliptical, and of good quality. It now appears that there are a number of palms of this variety already growing in the Coachella Valley of California, although their identity was in doubt prior to the recent investigations of this department in Iraq.

80793. *Digal Iman Husain.* Obtained at Mandali. A seedling date of which only a few palms have been propagated locally. The fruit is oblong, rather large, and of the amber type, characterized by a darker color at the base than at the apex.

80794. *Digal Umad.* A local variety in Mandali. The fruit resembles somewhat the *Khadrawy* of northern Iraq.

80795. *Fursi.* Obtained in Basra. A variety occurring, though not very common, in southern Iraq. Observations on a specimen of this variety, now fruiting at the United States Experiment Date Garden, Indio, Calif., indicate that it is promising for testing in more humid date areas. The fruit is nearly black, medium sized, oblong-elliptical, and of good quality.

80796. *Gantar.* Obtained in Basra. A small subspherical amber date said to be late ripening. It is said that nearly 2 per cent of the adult female palm population of the Shaat Al Arab belong to this variety. It is also not uncommon in the date gardens of the Tigris and the lower Euphrates.

80797. *Gnami.* A male variety of southern Iraq obtained in Basra.

80798. *Jaafary.* Obtained in the Oasis of Mandali, where this variety is chiefly found. A good soft black date from northern Iraq. It is medium to large and oblong to broadly elliptical.

80799. *Karunfuli.* A local variety occurring at Mandali. The medium-sized fruit is of the black type and resembles the *Jaafary* [No. 80798] in quality, but differs in shape, being ovate rather than oblong.

80800. *Khadrawy of northern Iraq.* Obtained in Mandali. An entirely different variety from the Khadrawy of Basra, southern Iraq, which has already become established in the southwestern United States. Owing partly to the fact that they do not occur in the same localities, it was not recognized in Iraq prior to the investigations of the United States Department of Agriculture that two of their important varieties were going under the same name. The fruit of the northern variety is very similar to that of the southern variety, but is larger and later in ripening.

80801. *Khasab.* Obtained in Basra. A medium-sized black date said to be the latest-ripening variety in southern Iraq. Sometimes the dates are allowed to remain on the palms until the coming of the Christmas frosts. Although the flavor is but indifferent, yet a date which so lengthens the season for fresh fruit does not lack popularity. About 1 in 6,000 palms on the banks of the Shaat Al Arab is of this variety, and it is to be found on the banks of the Tigris as far north as Baghdad, but has not been found on the Euphrates.

80802. *Khatooni.* A local variety in Mandali. The fruit is small to medium sized, oblong, purplish black, and of fair quality.

80780 to 80809—Continued.

80803 and 80804. *Maktum.* A medium to large, oblong, amber date with a mild flavor. It is late ripening and is of excellent quality. It is already well known in the southwestern United States, where there are a limited number of palms. The variety is widely distributed in Iraq, but is nowhere very abundant, existing largely as specimen palms for the use of garden owners rather than for commercial purposes.

80803. Obtained in Basra.

80804. Obtained in Mandali.

80805. *Nabaty.* A single offshoot brought in by one of the natives who assisted in packing at Basra and who said it was a very fine date. It is probably a seedling.

80806. *Salany.* Obtained in Mandali. A medium to large-sized reddish-brown date of fair quality.

80807. *Shalany.* A local variety obtained in Mandali.

80808. *Sayer.* Obtained in Basra. The commonest variety in southern Iraq, said to compose about 45 per cent of the total palm population. It is not generally regarded very highly in Iraq, but has certain qualities which make it desirable for testing in prospective date areas in the United States. It is very resistant to adverse conditions, survives drought better than any other variety, and is said to be less subject to insect attacks. In Iraq it is generally planted on the poorest soil, which may have something to do with the poor quality of the fruit obtained. The fruit is medium sized, oblong, deep red, cures well, and seems adapted to commercial handling.

80809. *Red Maktum.* Obtained in Mandali. An inferior seedling having no resemblance either in palm or in fruit to the real *Maktum* as far as could be observed. It is a medium-sized date of a dull reddish brown.

80810. BUDDLEIA MACROSTACHYA Benth. Loganiaceae.

From Gangtok, Sikkim, India. Seeds presented by the Sikkim Forest Manager. Received May 15, 1928. Numbered in June, 1929.

A tender shrub, 3 to 8 feet high, with white, woolly, oblong-lanceolate leaves up to 8 inches long and white flowers with an orange throat, in dense spikes 4 to 10 inches long. Native to the Himalayas.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 100

Washington, D. C. ▼ Issued April, 1931

PLANT MATERIAL INTRODUCED BY THE OFFICE OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1929 (Nos. 80811–81619)

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INTRODUCTORY STATEMENT

This inventory (Nos. 80811 to 81619), for the period from July 1 to September 30, 1929, is conspicuous for the fact that it records the arrival of seeds rather than plants. This is particularly important for the reader to remember, as the acquisition of seeds in no way guarantees their germination or the production of plants. In many cases definite knowledge exists that no plants will result from the seeds recorded.

The continued activities of the agricultural explorers in the Orient, P. H. Dorsett and W. J. Morse, are attested by their long lists of soybean varieties, as well as many other forage crops and miscellaneous plants.

Particular attention may be called to the many seeds presented by S. W. McLeod Braggins, superintendent, La Mortola, Ventimiglia, Italy (81074–81208), including many species of aloe, agave, and sempervivum, for use in localities with similar climates. This material was brought in for particular experimental work and will not be available for other experimenters for several years, as some studies will have to be made in order to determine variations from seed due to cross-pollination and the breaking up resulting from hybrid seeds.

This inventory also records additions to the collection of ericas already brought in for Government testing and study. Of particular note is the gift of seeds of rare Cape heaths, presented by R. H. Compton, Director of the National Botanic Gardens, Kirstenbosch, Newlands, Union of South Africa (*Erica* spp., 81230–81247). Not all of these have produced plants, but from those that have germinated will come several new heaths for general experiment.

Several importations of sugarcanes are included from the Java Sugar-Producers Association's experiment station, Pasuruan, Java (81356–81381); from the Colonial Sugar Refining Co., Sydney, Australia (80952–80995 and 81448–81472); a collection of melons (*Cucumis melo*, 81382–81405) presented by the Deputy Director of Gardens at Saharanpur, through the Director of the Agricultural Research Institute, Imperial Department of Agriculture in India, at Pusa, and Robert Frazer, American consul general, Calcutta, India, and many palms (81581–81594) presented by R. O. Williams, Superintendent and Assistant Botanist of the Department of Agriculture, Port of Spain, Trinidad, British West Indies, for the collection at Chapman Field, Coconut Grove, Fla.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

OFFICE OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., November 11, 1930.

38644—31——1

INVENTORY[1]

80811 to 80820.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, United States Department of Agriculture. Received July 8, 1929.

80811. ASTRAGALUS SINICUS L. Fabaceae.

No. 311. Near Gifu, May 31, 1929. A red-flowered Japanese clover used extensively in this region.

80812. CAPNOIDES sp. Papaveraceae.

No. 192. Growing at an altitude of about 1,500 feet, in shady places near Daikoda, an old temple on the east side of Mount Hiei, not far from Kyoto, May 26, 1929. A plant 10 to 18 inches high, with brick-red flowers resembling in shape those of the snapdragon.

80813. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Four-rowed barley.**

No. 453. Barley heads from a field near Urawa, June 14, 1929.

80814. LONICERA CAERULEA EDULIS (Turcz.) Regel. Caprifoliaceae. **Honeysuckle.**

No. 308. Collected from wild plants on the side of a hill at Kamo Machu, May 28, 1929. A honeysuckle with large bright-red edible oblong fruits of very good quality.

80815. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

No. 153. Collected from a small park in the center of Tokyo, June 14, 1929. A short grass with very tough, persistent rhizomes which root at practically every joint.

80816. PHLEUM sp. Poaceae. **Grass.**

No. 310. Kyoto, May 23, 1929. *Kemuto so.* A grass used in small dishes with water scenes. The seed is sown on cotton, makes a fine sodlike mat of green, and is quite effective.

80817. TRIFOLIUM sp. Fabaceae. **Clover.**

No. 344. Collected from plants on rice paddy ridges in the vicinity of Atsuki, June 25, 1929. A species closely resembling ordinary white clover, but the seeds do not appear to be so plump nor so large.

80811 to 80820—Continued.

80818 and 80819. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

80818. No. 577. Collected on a mountain top at an altitude of about 3,500 feet, on the trail between Shoji and Kofu, June 28, 1929.

80819. No. 600. Shioza Ki, June 30, 1929.

80820. RUBUS TRIFIDUS Thunb. Rosaceae.

No. 102. Collected in Hibiya Park, Tokyo, June 7, 1929. Vigorous plants sometimes 10 feet or more high, having green canes without thorns, white flowers, and rather dull yellow fruits which are three-fourths of an inch or more in diameter and half an inch long when fully ripe, becoming bright yellow.

For previous introduction see No. 58652.

80821 to 80847. SOJA MAX (L.) Piper (*Glycine hispida* (Maxim.). Fabaceae. **Soybean**

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received July 8, 1929.

Obtained from Dr. Keiji Adachi, Chief Director of the Akita Ken Agricultural Experiment Station, Akita, June 13, 1929.

80821. No. 426. Originally from the Rikuu Agricultural Experiment Station of the Imperial Japanese Department of Agriculture and Forestry. *Rikuu nijin rokugou.* Seeds straw yellow, nearly round, but apparently mixed as the color of the hilum varies from pale yellow to brown.

80822. No. 427. Originally from the South Manchurian Railway Agricultural Experiment Station, Koshurei. *Shiheigai shirobana.* Seeds straw yellow, but apparently a mixed lot, varying in size and color of hilum.

80823. No. 428. Originally from the Niigata Ken Agricultural Experiment Station. *Kiushirou.* Seeds straw yellow, nearly round, medium sized, with distinctive brown hilum.

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[1] It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Office of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identification, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this office, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

80821 to 80847—Continued.

80824. No. 429. A variety developed by the Akita Ken Agricultural Experiment Station. *Kuro saya shichigou.* Seeds straw yellow, nearly round, medium sized, glossy seed coat, with distinctive brown hilum.

80825. No. 430. Originally from the Rikuu Agricultural Experiment Station of the Imperial Japanese Department of Agriculture and Forestry. *Nagazuki.* Seeds straw yellow, medium large, with pale-brown hilum.

80826. No. 431. Developed by the Akita Ken Agricultural Experiment Station. *Ogon.* Seeds straw yellow, nearly round, glossy seed coat, with distinctive brown hilum.

80827. No. 432. Originally from the South Manchurian Railway Agricultural Experiment Station, Koshurei. *Shiriukou.* Seeds straw yellow, medium sized, with pale hilum.

80828. No. 433. Originally from the Fukushima Ken Agricultural Experiment Station. *Asahi rokojugo.* Seeds straw yellow, medium large, with brown hilum.

80829. No. 434. Originally from the Iwate Ken Agricultural Experiment Station. *Nooki.* Seeds straw yellow, nearly round, glossy seed coat, with distinctive brown hilum.

80830. No. 435. Originally from the Rikuu Agricultural Experiment Station of the Imperial Department of Agriculture and Forestry. *Rikuu nijin gogou.* Seeds straw yellow, nearly round, glossy seed coat, with distinctive brown hilum.

80831. No. 436. Originally from the South Manchurian Railway Agricultural Experiment Station, Koshurei. *Kaigen shirobana.* Seeds straw yellow, but apparently a mixed lot, varying in size and color of hilum.

80832. No. 437. Developed by the Akita Ken Agricultural Experiment Station. *Rikuu nijin shichigou.* Seeds straw yellow, medium sized, nearly round, with distinctive dark-brown hilum.

80833. No. 438. Originally from the Miyagi Ken Agricultural Experiment Station. *You getsu.* Seeds straw yellow, medium large, with brown hilum.

80834. No. 439. Originally from the Fukushima Ken Agricultural Experiment Station. *Daruma niju.* Seeds straw yellow, medium large, with light-brown hilum.

80835. No. 440. Originally from the Fukushima Ken Agricultural Experiment Station. *Shiro kachi koku niju.* Seeds straw yellow, large, with pale hilum.

80836. No. 441. Originally from the Niigata Ken Agricultural Experiment Station. *Kariba takiya.* Seeds straw yellow, medium sized, with a light brown to brown hilum.

80837. No. 442. Originally from the Rikuu branch station of the Imperial Japanese Department of Agriculture and Forestry. *Mejiro.* Seeds straw yellow, of medium size, with pale hilum.

80821 to 80847—Continued.

80838. No. 443. Developed by the Akita Ken Agricultural Experiment Station. *Ani.* Seeds straw yellow, medium sized, nearly round, with hilum varying from russet brown to very dark brown. The seeds are quite similar to No. 444 [No. 80839].

80839. No. 444. Originally from the Miyagi Ken Agricultural Experiment Station. *Kairyo azuma nishiki.* Seeds straw yellow, nearly round, medium sized, and with distinct brown hilum.

80840. No. 445. Originally from the Iwate Ken Agricultural Experimental Station. *Tokichi.* Seeds straw yellow, nearly round, medium sized, with distinct brown hilum.

80841. No. 446. Originally from the Iwate Ken Agricultural Experiment Station. *Niuchan.* Seeds straw yellow, medium large, with pale hilum.

80842. No. 447. Originally from the Miyagi Ken Agricultural Experiment Station. *Satou daizu.* Seeds straw yellow, nearly round, medium sized, with distinct brown hilum.

80843. No. 448. Originally from the Miyagi Ken Agricultural Experiment Station. *Tama tsukuri.* Seeds straw yellow, medium large, with pale hilum.

80844. No. 449. Originally from the South Manchurian Railway Experiment Station, Koshurei. *Ho ten shirokubi daizu.* Seeds straw yellow, medium large, with pale hilum.

80845. No. 450. Originally from the Rikuu Agricultural Experiment Station of the Japanese Department of Agriculture and Forestry. *Rikuu niju sango.* Seeds straw yellow, medium large, with light-brown hilum.

80846. No. 451. Developed by the Akita Ken Agricultural Experiment Station. *Akita.* Seeds straw yellow, glossy, nearly round, with pale-yellow hilum.

80847. No. 452. Developed by the Akita Ken Agricultural Experiment Station. *Shiro saya.* Seeds very pale straw yellow, medium large, with pale hilum.

80848. MOMORDICA COCHINCHINENSIS (Lour.) Spreng. Cucurbitaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received July 15, 1929.

Tabolo. A very vigorous, tall climber, native to the Philippine Islands, producing large, round, greenish yellow, attractive fruits which should make it popular as an ornamental vine in southern Florida, Porto Rico, and Panama. The immature fruits are boiled and eaten with meat by the natives, and the tender leaves also are boiled and eaten. The numerous large, round, flat seeds appear to be very rich in oil.

For previous introduction see No. 58583.

80849. ORNITHOPUS sp. Fabaceae.

From Rabat, Morocco. Seeds presented by Dr. E. Miége, Station de Sélection et d'Essais de Semences. Received July 15, 1929.

80850. CANAVALIA sp. Fabaceae.

From Honolulu, Hawaii. Seeds presented by F. G. Krauss, Director of Extension Service, University of Hawaii. Received July 15, 1929.

A hybrid Canavalia with seeds having highly diverse markings. These stocks are the F_3 generation and are consequently still segregating freely. One of the parents, *Canavalia ensiformis*, has been grown extensively as a green-manure crop in Hawaii, and this hybrid may thrive in the southern part of the United States.

80851 to 80858.

From Manila, Philippine Islands. Plants presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received July 2, 1929.

80851. ANACOLOSA LUZONENSIS Merr. Olacaceae.

Galo. A tree about 50 feet high, with alternate simple leaves in the axils of which are borne nuts about the size of a filbert and of good quality and flavor. Native to the Philippine Islands.

For previous introduction see No. 38395.

80852. ARTOCARPUS ODORATISSIMA Blanco. Moraceae. **Marang.**

A medium-sized tropical tree which resembles the jackfruit and the seeded breadfruit in appearance, but is superior in quality to either. It is native to the southern Philippine Islands and the Sulu Archipelago. The roundish oblong fruits, about 6 inches long, have a thick, fleshy rind and white, sweet flesh which is juicy and aromatic, with a pleasant flavor.

For previous introduction see No. 58025.

80853. CUBILIA BLANCOI Blume. Sapindaceae.

Kubili. A medium-sized tree up to 25 feet high, with compound leaves and bright-green spiny oblong fruits, 2 to 3 inches long, containing a nut about an inch long, which is of excellent quality either roasted or boiled. Native to the Philippine Islands.

80854. GARCINIA MOOREANA Wester. Clusiaceae.

Bunag. A handsome tree of pyramidal habit attaining a height of 20 feet or more, native to Jolo and Palawan. The leaves are elliptic to elliptic-ovate, coriaceous, and 6 to 8 inches long. The fruit is similar to a mangosteen, except that it is somewhat smaller, is red in color, and has a thinner but fibrous, crustaceous pericarp; the flesh is white and sharply acid, of agreeable flavor, but too sour to be eaten out of hand. It would probably make a good preserve. It ripens in the latter part of July and August. The mangosteen has been successfully grafted on the bunag.

80855. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

Kamingi. A Philippine relative of the lychee (*Litchi chinensis*). The tree is about 50 feet high, with dark-green, pinnate leaves, similar to those of the lychee, and roundish oblong fruits, about an inch long, borne in loose terminal clusters. The tough leather "shell" of the fruit, which is covered with short spiny projections, incloses a scant edible pulp, in which is embedded a relatively large seed, that is roasted and eaten. The tree may have value as a stock for the lychee.

For previous introduction see No. 68957.

80856. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

Carabao. Grafted plants.

80857. PANGIUM EDULE Reinw. Flacourtiaceae.

Pangi. A large tree, native to the Philippine Islands, up to 75 feet high, with very large entire or lobed bright-green leaves, yellowish green flowers, and oval brown fruits, 6 inches long, with edible flesh inclosing numerous seeds. The seeds are poisonous when fresh, but are edible after steeping in water.

For previous introduction see No. 73250.

80858. PISONIA ALBA Span. Nyctaginaceae.

Maluko. A small tree up to 35 feet high, with thin pale-green, oblong-ovate leaves, 4 to 8 inches long, which make good greens resembling spinach. Native to the Malay Peninsula.

For previous introduction see No. 54500.

80859. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Turkestan. Seeds obtained from N. I. Vavilov, Bureau of Applied Botany and New Cultures, Leningrad, Russia, Union of Socialistic Soviet Republics, through W. T. Swingle, Bureau of Plant Industry. Received July 15, 1929.

The wild form of the pistache is a xerophilous plant, able to stand great dryness of soil and air. It grows at altitudes of 2,000 to 5,000 feet in the southern parts of central Asia.

80860. FICUS sp. Moraceae. **Fig.**

Plants grown at Chapman Field, Coconut Grove, Fla., from seeds presented by G. W. Edwards, director, Agricultural Experiment Station, Guam. Originally received as *Ficus tinctoria*, these plants do not agree with the others grown from the same lot of seeds, and have therefore been segregated.

80861. SYZYGIUM CUMINI (L.) Skeels (*Eugenia jambolana* Lam.). Myrtaceae. **Jambolan.**

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received July 18, 1929.

Duhat. A tree, native to tropical Asia, 24 to 45 feet high, with ovate, coriaceous, shining leaves, numerous yellow flowers crowded in terminal or axillary panicles, followed by loose clusters of two to seven dark-purple or black, smooth, shining, ovoid fruits with rather large clingstone seeds. The thin skin adheres to the sweet, juicy, pleasant subacid pulp, which is white tinged with purple, and the texture somewhat resembles that of the cherry. The fruits may be eaten out of hand with relish, and they make an excellent jelly. In India it is sometimes made into wine. This variety is probably of prehistoric introduction into the Philippines and is common throughout the archipelago.

80862. LILIUM sp. Liliaceae. **Lily.**

From Japan. Bulblets collected by R. K. Beattie, Bureau of Plant Industry. Received July 22, 1929.

No. 850. Natsu Kusa, Kampara Mura, Watarai Gun, Miye Ken, June 27, 1929. A very fine wild species bearing pink flowers.

80863. CURCUMA sp. Zinziberaceae.

From Java. Rootstocks collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour Expedition. Received June 28, 1926. Numbered in July, 1929.

No. 789. Obtained in the native market at Soerabaya, May 17, 1926. A gingerlike plant up to 3 feet high, with large leaves and spikes, a foot long, of purplish yellow flowers with reddish yellow bracts.

80864. TERMINALIA CHEBULA Retz. Combretaceae.

From Darjiling, India. Seeds presented by J. E. Leslie, Curator, Lloyd Botanic Garden. Received July 13, 1929.

A large deciduous tree, native to northern India, Burma, and Ceylon, with oval-elliptic leaves about 5 inches long and terminal racemes of white flowers. The ovoid, leathery fruits are the black myrobalan of commerce, which is one of the most valuable tanning materials of India.

For previous introduction see No. 66157.

80865 and 80866.

From Lamao, Bataan, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received July 18, 1929.

80865. EUGENIA CURRANII C. B. Robinson. Myrtaceae. **Lipoti.**

From the Lamao Experiment Station. A handsome vigorous tree, native to the Philippine Islands, about 30 feet high, with a gnarled trunk and tortuous branches and dark-green, shining leaves. The fruits are in clusters of 20 to 50 on the bare boughs or between the leaves on the larger twigs; the individual fruit is about the size of a grape with thin, smooth, dark-red skin and white, dry, crisp flesh, with a flavor like that of the crab apple. The seed is comparatively large. The fruit is probably best suited for making preserves and jelly.

For previous introduction see No. 60974.

80866. EUPHORIA DIDYMA Blanco. Sapindaceae.

Alpay. From the Lamao Experiment Station. A small attractive tree, up to 50 feet high, with compound leaves made up of prominently veined leathery lanceolate leaflets and compact terminal clusters of small flowers followed by greenish warty fruits an inch in diameter, having a shell-like rind and juicy sweet translucent pulp inclosing a large seed. Native to the Philippine Islands.

80867 to 80869.

From Jerusalem, Palestine. Seeds presented by the director of the Department of Agriculture, Forests and Fisheries. Received July 18, 1929.

80867 to 80869—Continued.

80867. COLCHICUM DECAISNEI Boiss. Melanthiaceae.

A variety, native to Syria, with rosy lilac flowers which appear without the leaves in late October. It differs very little from *Colchicum laetum*, which, in turn, is much like *C. autumnale*.

For previous introduction see No. 77476.

80868. IRIS ATROPURPUREA Baker. Iridaceae. **Blackpurple iris.**

An oncocyclus iris with linear leaves about 6 inches long and a stem 6 to 8 inches high, bearing a single flower. The oblong outer segments, 2 inches long, are purplish black with a yellow patch in the throat and a yellow, black-tipped beard. The inner segments are larger, of the same color, and are veined. It is native to Syria.

80869. IRIS PALAESTINA (Baker) Boiss. Iridaceae.

Bulbs of a winter-flowering iris, closely related to *Iris caucasica*, with falcate leaves 3 to 9 inches long and a very short stem, bearing one to three flowers. These are pale yellow tinged with lilac; the outer segments are oblong with auriculate claws, and the narrowly lanceolate inner segments are very minute. Native to Palestine.

80870. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From Bataan, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received July 19, 1929.

From the Lamao Experiment Station.

For previous introduction and description see No. 80855.

80871. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From Botolan, Subic, Zambales, Philippine Islands. Seeds presented by the Bureau of Forestry, Manila, through W. T. Swingle, Bureau of Plant Industry. Received July 22, 1929.

Alupag amo.

For previous introduction and description see No. 80855.

80872 to 80875.

From China. Offshoots obtained from F. A. McClure, Curator, Herbarium of the Lingnan University, Canton. Received April 10, 1929. Numbered in July, 1929.

80872. BAMBUSA sp. Poaceae. **Bamboo.**

No. 1098. Originally from Heunglokeuk, Kwangtung, March, 1925. *Wong chuk.* A sympodial type of bamboo cultivated for its thin-walled culms which are used in weaving, rope making, and somewhat in the manufacture of a cheap grade of paper for ceremonial purposes. The variety is widely distributed in the Province and is most extensively cultivated in the Kwongning district of western Kwangtung. The mature culms reach a height of 24 feet and a circumference of 5 inches. The nodes are not prominent and the culms are very upright in habit

80872 to 80875—Continued.

with drooping tips. The clump habit is compact, not rapidly spreading. The branches are in fascicles, nearly all of a size, slender, and up to about 3 feet long. The lower nodes are always free of branches except when a culm is injured, and usually even free of buds. The leaves are 4 to 6 inches long.

80873. BAMBUSA sp. Poaceae. **Bamboo.**

No. 1099. Obtained at the Lingnan University, where it has been established for several years. *Fan taan chuk.* A bamboo known to occur somewhat on the upper reaches of the Sui River, western Kwangtung, and also in northern Kwangtung. It is a medium-large, thin-walled sympodial type, used chiefly for making steaming trays for Chinese restaurants. It is too brittle for most weaving purposes or for making rope, but is extremely ornamental on account of the compact clump habit. The tall, straight culms are gray with siliceous powder and naked of branches for 12 to 15 feet in mature specimens.

80874. BAMBUSA sp. Poaceae. **Bamboo.**

No. 1100. Obtained originally at Heunglokeuk, Kwangtung, April, 1925. *Ngau kan chuk.* A small to medium-sized wild bamboo of the sympodial type. The culms of the largest specimens are said to be highly esteemed for opium pipes because of their hard, smooth texture. Otherwise they are not known to be of economic importance. It is a pretty ornamental, however, and although it does not spread it produces new culms, even in very poor soil, at a prodigious rate. The bases of some of the more mature culms are inconspicuously marked with pale-yellow, longitudinal stripes.

80875. BAMBUSA sp. Poaceae. **Bamboo.**

No. 1101. From the Lingnan University Garden, Canton. *Chaang ko chuk.* A thick-walled, stiff, straight bamboo of the sympodial type, cultivated for its culms which are put to many uses such as punting poles, the weaving of heavy pig crates and chicken crates, and in making the framework of temporary buildings. The largest culms in well-established clumps are 24 feet high and about 5 inches in circumference. This bamboo occurs in many parts of this Province, especially in the North River region. It is one of the most important economic bamboos in this part of China.

80876. CASTILLA ELASTICA Cerv. Moraceae. **Mexican rubbertree.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received July 23, 1929.

A large deciduous tropical forest tree from which rubber is obtained. It is native to Central America.

For previous introduction see No. 77387.

80877 to 80880.

From Elstree, Herts, England. Plants presented by Vicary Gibbs, Aldenham House Gardens. Received May 4, 1929.

80877. CLERODENDRUM TRICHOTOMUM Thunb. Verbenaceae. **Harlequin glorybower.**

80877 to 80880—Continued.

Variety *montanum.* A form of this upright shrub or small tree, native to China and Japan, with ovate leaves 4 to 8 inches long, loose terminal panicles of fragrant white flowers, and blue fruits with red calyxes.

80878. CRYPTOMERIA JAPONICA (L. f.) D. Don. Pinaceae. **Common cryptomeria.**

Variety *elegans nana.* A dense, dwarf, spreading form with short stiff leaves.

80879. CUPRESSUS NANA GLAUCA Hort. Pinaceae. **Cypress.**

A dwarf form with glaucous foliage.

80880. GENISTA SYLVESTRIS PUNGENS Vis. (*G. dalmatica* Bartl.). Fabaceae. **Broom.**

A shrub about 2 feet high with spiny flowering branchlets, simple linear leaves less than an inch long, and racemes 4 to 5 inches long of small yellowish flowers. Native to the Balkan Peninsula.

80881. CHAMAEDOREA TEPEJILOTE Liebm. Phoenicaceae. **Palm.**

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received August 27, 1929.

A palm, native to southern Mexico, up to 10 feet high, with pinnate leaves about 4 feet long. The undeveloped flowers are eaten as a vegetable.

For previous introduction see No. 77621.

80882. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Summit, Canal Zone. Plants presented by J. E. Higgins, Director, Plant Introduction Gardens. Received June 17, 1929.

Monte Lirio.

80883 to 80896.

From India. Seeds presented by the Department of Agriculture, Madras Presidency, through Edmund B. Montgomery, American consul, Madras. Received July 19, 1929.

80883 to 80887. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

80883. No. 6. From Cuddapah. *Kalingar.* A variety producing dark greenish striped fruits about 1½ feet long and 1½ feet in diameter, which are reddish inside and contain black seeds when ripe.

80884. No. 11. From Coimbatore. A black-seeded variety bearing red fruits.

80885. No. 12. From Coimbatore. A red-seeded variety bearing reddish white fruits.

80886. No. 13. From Coimbatore. A white-seeded variety bearing white fruits.

80887. No. 14. From Nandyal. *Kharbuj Kaya.* A prolific variety bearing round, black-seeded fruits about two months after sowing.

80888 to 80896. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

80883 to 80896—Continued.

80888 to 80892. From Cuddapah.

80888. No. 1. *Khirvi, Kharbuja.* A variety producing sweet fruits 8 inches long and up to a foot in diameter. The outside is reddish and striped, and the marrow is white.

80889. No. 2. *Khanda.* A sweet variety about the same size as No. 80888. The striped fruits are white outside, and the pulp is also white.

80890. No. 3. *Bathusa.* A variety producing smooth, round, sweet fruits about the size of a big mango, which are white both inside and out.

80891. No. 4. *Sherbet amer.* A variety with round, sweet fruits about the same size as No. 80890. The outer coat is dark green or reddish, and the marrow is greenish or yellowish white. It is highly valued.

80892. No. 5. *Papaya.* A variety with smooth, white, sweet fruits about a foot long and 9 inches broad, which are white inside.

80893 to 80896. From Prodattar.

80893 and 80894. Nos. 7 and 8. *Khurbuse.* The fruits are either round or oval, and the skin is pale brown and slightly wrinkled. A mixture of two numbers.

80893. [No data.]

80894. [No data.]

80895. No. 9. *Budam khurbuse.* A variety said to be the best in Prodattar. The small, oval fruits have greenish to pale-brown skin.

80896. No. 10. *Ghanna khurbuse.* A variety producing large fruits, sometimes very sweet, which have pale brown to pale red skin.

80897 and 80898.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received July 22, 1929.

80897. CARICA CAULIFLORA Jacq. Papayaceae.

This relative of the papaya is a tree 9 to 12 feet high, which is cultivated and probably native in Central America and Mexico. The trunk is crowned with large leaves that are cordate at the base and have the tip lobed about half way down into acuminate segments. The inconspicuous sessile inodorous flowers borne along the trunk are followed by ovoid yellow fruits 3 to 4 inches long.

For previous introduction see No. 80048.

80898. PRUNUS CAPULI Cav. Amygdalaceae. **Capulin.**

A tree, native to tropical America, up to 40 feet high, with lanceolate long-pointed coriaceous leaves 6 to 8 inches long, stout racemes, 4 to 6 inches long, of small white flowers which are followed by nearly black globose edible fruits half an inch in diameter.

For previous introduction see No. 80632.

80899 to 80904.

From Orleans, France. Plants purchased from La France Gauguin. Received April 19, 1929. Numbered in July, 1929.

80899 to 80901. CHRYSANTHEMUM MAXIMUM Ramond. Asteraceae. **Pyrenees chrysanthemum.**

80899. *Galathee.*

80900. *Mlle. Marcelle Gauguin.*

80901. *Perfection.*

80902 to 80904. HELENIUM AUTUMNALE L. Asteraceae.

80902. *Grandicephalum (nudiflorum) aurantium.*

80903. *Grandicephalum compactum bicolor.*

80904. *Grandicephalum gauffreanum.*

80905 to 80908.

From Sibolangit, Medan, Sumatra. Plants obtained by J. A. Lörzing. Received July 16, 1929.

80905. CITRUS sp. Rutaceae.

A wild lemonlike species, possibly the ancestor of the pummelo and other cultivated citrus fruits.

80906. DAEMONOROPS sp. Phoenicaceae. **Palm.**

A rattan used for plaiting.

80907. HOYA IMPERIALIS Lindl. Asclepiadaceae. **Wax plant.**

A shrubby climber with thick fleshy elliptical leaves 6 to 9 inches long and umbels of about 10 flowers which are brown-purple, whitish outside, and 3 inches across. Native to mangrove swamps in Borneo.

80908. PHOLIDOCARPUS SUMATRANA Beccari. Phoenicaceae. **Palm.**

A lofty fan-leaved palm native to the East Indies. It is 50 feet or more high, with a large strong trunk and stout, thorny leaf petioles.

80909. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Rostof on the Don, Russia. Seeds obtained from the North Caucasus Border Seed Cooperative Association, through J. W. Pincus, Amtorg Trading Corporation, New York, N. Y., and H. N. Vinall, Bureau of Plant Industry. Received July 24, 1929.

A French variety.

80910. KOKIA ROCKII Lewton. Malvaceae. **Kokio.**

From Hawaii. Seeds presented by Harold L. Lyon, in charge of the department of botany and forestry, Experiment Station of the Hawaiian Sugar Planters' Association. Received July 25, 1929.

Obtained at Kona, June, 1929. A handsome tropical tree, about 20 feet high, with somewhat fleshy, deep-green, orbicular leaves which are in whorls at the ends of the branches, and an abundance of bright-scarlet flowers about 6 inches in diameter.

For previous introduction see No. 69110.

80911 to 80931.

From Twyford, Berks, England. Plants purchased from John Waterer Sons & Crisp. Received April 9, 1929.

80911. CHRYSANTHEMUM MAXIMUM Ramond. Asteraceae.
Pyrenees chrysanthemum.

Phyllis Smith. A very fine Shasta daisy, 2½ feet high, bearing an abundance of beautiful lustrous white flowers on long wiry stems. The ray flowers are deeply cut, which gives the flower heads a ruffled appearance.

80912. DAPHNE HYBRIDA Lindl. Thymelaeaceae.

An evergreen garden hybrid closely resembling *Daphne odora*, with elliptic-oblong leaves 2 to 4 inches long and very fragrant violet or reddish purple flowers.

80913 to 80931. ERICA spp. Ericaceae.

80913 to 80921. ERICA CARNEA L.
Spring heath.

80913. A shrub a foot high, with soft green foliage, and bearing rosy white sweet-scented flowers between December and May.

80914. *Alba.* A white-flowered form.

80915. *Gracilis.* A variety with rich pink flowers borne during midwinter.

80916. *King George V.* An early variety bearing dark-red flowers.

80917. *Mrs. S. Doncaster.* A variety bearing light-pink flowers during midwinter.

80918. *Queen Mary.* A variety bearing beautiful rich pink flowers during midwinter.

80919. *Queen of Spain.* A variety bearing light-pink flowers during the early spring.

80920. *Thomas Kingscote.* A variety bearing pale-pink flowers during the early spring.

80921. *Winter Beauty.* A variety bearing rosy-pink flowers during midwinter.

80922. ERICA CILIARIS L. **Fringed heath.**

An evergreen shrub about a foot high, bearing large rosy-purple bells between June and September. Native to southern England.

For previous introduction see No. 79155.

80923. ERICA MEDITERRANEA L.
Biscay heath.

A large evergreen shrub 3 to 4 feet high, bearing pale-pink flowers between March and May. Native to the Mediterranean countries.

80924. ERICA SCOPARIA L. **Heath.**

Nana. A very decorative Mediterranean shrub about 2 feet high, with light-green evergreen foliage and long cylindrical spikes of greenish white flowers. It is excellent for edging beds.

80925. ERICA STRICTA Donn.
Corsican heath.

An evergreen shrub of compact upright habit, about 2 feet high, with

80911 to 80931—Continued.

whorled leaves and rosy-pink flowers which are borne during the summer. Native to southern Europe.

For previous introduction see No. 79061.

80926 to 80928. ERICA TETRALIX L.
Crossleaf heath.

80926. An evergreen shrub about a foot high, bearing rose-purple bells during the early autumn, generally August and September or later. Native to England.

For previous introduction see No. 79157.

80927. *Alba.* A white-flowered form.

80928. *Mollis.* A form with grayish white foliage.

80929 to 80931. ERICA VAGANS L.
Cornish heath.

80929. An evergreen shrub 12 to 18 inches high, bearing mauve-pink bells between August and October. Native to southern England.

For previous introduction see No. 79991.

80930. *Alba.* A variety about 18 inches high, bearing pure white flowers between August and October.

80931. *Rosea.* A pale rose-flowered variety which begins bearing in July and continues throughout the season.

80932. CRACCA TOXICARIA (Pers.) Kuntze (*Tephrosia toxicaria* Pers.). Fabaceae.

From Paramaribo, Dutch Guiana. Seeds presented by S. Sahal, Director, Agricultural Experiment Station. Received July 25, 1929.

A shrub up to 7 feet high, with nine or more oblong leaflets and racemes of white and pink flowers. Parts of the plant are crushed and thrown in the water to poison fish. Native to Peru.

80933. GEONOMA sp. Phoenicaceae.
Palm.

From Cali, Colombia. Seeds presented by M. J. Rivero, through O. F. Cook, Bureau of Plant Industry. Received July 24, 1929.

The Geonomas are native to tropical America. They have reedlike ringed stems, entire or pinnately lobed leaves, and globose black fruits.

80934 to 80950.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received July 25, 1929.

80934. BRASSICA RAPA L. Brassicaceae.
Turnip.

No. 704. From the specially selected and grown stock of the Agricultural College, Department of Agriculture, Kyoto Imperial University, July 2, 1929. *Suigukina makino.* A variety used for pickling.

80934 to 80950—Continued.

80935. CORIARIA JAPONICA A. Gray. Coriariaceae. **Japanese coriaria.**

No. 702. Collected along a water run in a big valley at Shioza Ki, June 30, 1929. *Ushi koroshi* (killing the cow). A shrub with bright-green leaves and an abundance of bright-red fruits about the size of small cherries. When fully ripe the fruits are very dark red or purple. The flowers are said to be yellow. The plant is said to be poisonous; hence the local name.

For previous introduction see No. 66546.

80936. FRAGARIA sp. Rosaceae. **Strawberry.**

No. 354. From the northern side of Mount Fuji, at altitudes between 2,000 and 3,000 feet, June 26, 1929. The berries are round and oblong, red when ripe, and of good flavor and quality.

80937 and 80938. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

80937. No. 576. Collected in a valley between two mountain ridges on a trail between Shoji and Kofu, June 28, 1929.

80938. No. 599. Collected in a good-sized valley region at Shioza Ki, June 30, 1929.

80939. LONICERA sp. Caprifoliaceae. **Honeysuckle.**

No. 332. Tokoji Temple, Ishido, Kitaadachi Gun, Saitama Ken, June 20, 1929. A species with bright-red fruits, three-eighths of an inch in diameter and five-eighths of an inch long, which are very juicy, sweet, and of good quality.

80940. LONICERA TENUIPES Nakai. Caprifoliaceae. **Honeysuckle.**

No. 357. From the northern side of Mount Fuji, at an altitude of about 2,500 feet, June 26, 1929. A shrub 3 to 6 feet high, with elliptical to oblong leaves densely pilose beneath, axillary reddish flowers nearly an inch long, and red fruits. Native to Japan.

80941. OSTERDAMIA JAPONICA (Steud.) Hitchc. (*Zoysia japonica* Steud.) Poaceae. **Japanese lawngrass.**

No. 579. From plants along river-bottom land at Anayama, June 29, 1929. A grass which makes a very tight sod and only a short growth.

80942 to 80946. RUBUS spp. Rosaceae.

80942. RUBUS sp.

No. 345. Collected near Otsuki, June 25, 1929.

80943. RUBUS PALMATUS Thunb. **Bank raspberry.**

No. 507. Growing in lava formation along a mountain trail at altitudes between 2,000 and 2,500 feet, near Shojiko, in the Mount Fuji region, June 27, 1929. A raspberry 3 to 4 feet high bearing an abundance of large, orange-yellow fruits of fairly good flavor.

80944. RUBUS sp.

No. 525. Collected from large plants along a stream in a valley between mountain ridges along the trail between Shoji and Kofu, June 28, 1929.

80934 to 80950—Continued.

A raspberry bearing bright-red fruits of good size; very sweet and of good quality when fully ripe.

80945. RUBUS sp.

No. 574. From bushes on a mountain top at an altitude of about 3,000 feet, on the trail between Shoji and Kofu, June 28, 1929. A species with bright-red glossy fruits.

80946. RUBUS PARVIFOLIUS L.

No. 701. Collected from plants growing along an irrigating ditch in the valley at Shioza Ki, June 30, 1929. A raspberry bearing red fruits which are somewhat acid but of very good flavor.

80947. SALIX sp. Salicaceae. **Willow.**

No. 353. Growing on the northern side of Mount Fuji, at an altitude of about 4,000 feet, June 26, 1929. This species appeared to be small; at least, the seeds were collected from a plant not more than 3 feet high.

80948. (Undetermined.)

No. 578. Collected on a mountain trail in the woods between Shoji and Kofu, June 28, 1929. A vine with clusters of small, oblong, bright-red fruits which turn black when ripe.

80949. VICIA HIRSUTA (L.) S. F. Gray. Fabaceae. **Vetch.**

No. 343. Collected near Otsuki, June 25, 1929. The plants, leaves, and seed pods of this variety are small. The black seed pods contain one or two small seeds mottled gray and black.

80950. VICIA TETRASPERMA (L.) Moench. Fabaceae. **Vetch.**

No. 342. Collected along the highway on a river bank, Katsuura River, well above the stream in a rather dry situation, near Otsuki, June 25, 1929. A vetch with small leaves, flowers, and pods. The flowers are white tinged with blue, and the pods contain up to four or five small black seeds.

80951. PYRENOGLYPHIS MAJOR (Jacq.) Karst. (*Bactris major* Jacq.). Phoenicaceae. **Beach palm.**

From Guatemala. Seeds presented by Wilson Popenoe, research department, United Fruit Co., Tela, Honduras. Received June 20, 1929. Numbered in August, 1929.

Biscoyol. A spiny palm, native to tropical America, with a trunk 9 to 15 feet high and 1 to 2 inches in diameter, armed with rows of black spines 2 inches long. The leaves, with spiny petioles, are 4 to 6 feet long and pinnately divided into densely setose linear segments with black hairs along the margin. The flowers are yellowish green and are followed by green edible fruits about the size of an apricot.

80952 to 80995. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Sydney, New South Wales, Australia. Cuttings presented by P. H. Goldfinch, general manager of the Colonial Sugar Refining Co. Received July 31, 1929.

80952. No. 10.

80953. No. 16.

80954. No. 18.

80955. No. 20.

80952 to 80995—Continued.

80956. No. 35.
80957. No. 36.
80958. No. 38.
80959. No. 39.
80960. No. 40.
80961. No. 42.
80962. No. 44.
80963. No. 45.
80964. No. 46.
80965. No. 50.
80966. No. 54.
80967. No. 56.
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80969. No. 65.
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80972. No. 80.
80973. No. 82.
80976. No. 90.
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80978. No. 97.
80979. No. 98.
80980. No. 106.
80981. No. 109.
80982. No. 110.
80983. No. 201.
80984. No. 202.
80985. No. 206.
80986. No. 207.
80987. No. 208.
80988. No. 211.
80989. No. 220.
80990. No. 251.
80991. No. 260.
80992. No. 261.
80993. No. 262.
80994. No. 263.
80995. No. 286.
80974. No. 87.
80975. No. 89.

80996. AMORPHOPHALLUS CAMPANULATUS (Roxb.) Blume. Araceae.

From India. Roots presented by Richard B. Gregg. Received December 15, 1928. Numbered in August, 1929.

Suran. As a food root this is highly esteemed in most Provinces of India, having a high starch content and a gently laxative effect, and is also said to improve digestive power. It is propagated by planting the large nodules which, for planting purposes, are treated like parts of a potato. The root and nodules may be dried indefinitely, and, in fact, it is considered desirable to expose the roots to strong sunshine for several days after peeling. The roots grow to a large size, as big as a large cabbage or even larger, and the meat is dull yellow. They may be cooked, baked, or fried, but if not thoroughly cooked they are a little bitter.

80997. DRACAENA sp. Liliaceae. Dracena.

From Cebu, Philippine Islands. Seeds presented by P. J. Webster, Bureau of Agriculture, Manila. Received November 7, 1928. Numbered in August, 1929.

The dracenas are tropical, woody, evergreen plants with sword-shaped to ovate, mottled leaves, clustered at the top of the stem. The greenish yellow campanulate or salverform flowers are followed by red or yellow berries.

80998. LANSIUM DOMESTICUM Jack. Meliaceae. Langsat.

From Laguna, Philippine Islands. Seeds presented by José S. Camus, Acting Director, Bureau of Agriculture, Manila. Received December 6, 1928. Numbered in August, 1929.

A tree 40 feet high, with pinnate leaves composed of five to seven elliptic leaflets each 4 to 8 inches long. The fruit varies in form and character, but is generally oval

80998—Continued.

or round, 1 to 2 inches in diameter, velvety and straw colored, with a thick leathery skin inclosing five segments of white, translucent, juicy, aromatic flesh, and one to three large seeds.

80999. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

From Carabayllo Valley, north of Lima, Peru. Seeds presented by Ralph T. Gray, Estación Experimental Agrícola, Lima. Received August 5, 1929.

Variety *cerasiforme.* A wild form of the tomato, native to Peru.

For previous introduction see No. 79532.

81000. GUNDELIA TOURNEFORTII L. Asteraceae.

From southwestern Kurdistan. Seeds presented by George E. Lamsa, Mission House, New York, N. Y. Received July 1, 1929.

A perennial herb much resembling a thistle with milky juice, spiny many-lobed leaves, and flower heads which produce seeds somewhat like those of the sunflower, *Helianthus annuus.* It is native to Kurdistan and Persia, where the young shoots are eaten as a vegetable. The seeds are also eaten.

For previous introduction see Nos. 80672 and 80673.

81001 to 81004.

From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, United States Department of Agriculture. Received July 2, 1929.

81001 to 81003. LILIUM spp. Liliaceae. Lily.

81001. LILIUM sp.

No. 287. Bulbs obtained in Sapporo, Hokushu, May 29, 1929. *Taisho yuri.* An edible variety used extensively in Hokushu.

81002. LILIUM sp.

No. 288. Bulbs obtained in Sapporo, Hokushu, May 29, 1929. *Wada yuri.* An edible variety.

81003. LILIUM sp.

No. 403. Bulbs obtained in Hakodate, Hokushu, May 30, 1929. *Shoyokuyo yuri.* An edible variety.

81004. ZINZIBER OFFICINALE Roscoe. Zinziberaceae. Ginger.

No. 286. Obtained in Sapporo, Hokushu, May 27, 1929. *Imoshoga.* Used as a garnish when plants are young.

For previous introduction see No. 72730.

81005. CANARIUM sp. Balsameaceae.

From the Santa Cruz Islands. Nuts presented by Dr. Alfred Rehder, Arnold Arboretum, Jamaica Plain, Mass. Received July 2, 1929.

Anai. A species said to constitute one of the principal foods of the New Hebrides and the Solomon Islands.

81006 to 81051.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received July 2, 1929.

81006. BECKMANNIA SYZIGACHNE (Steud.) Fern. Poaceae. **Grass.**

No. 305. Collected along an irrigation ditch near the electric railway station of Kashwara Junction, May 28, 1929.

81007. DAUCUS CAROTA L. Apiaceae. **Carrot.**

No. 254. From the Yamato Seed Co., Sapporo, May 25, 1929. *Sapporo onaga ninjin.* A large long carrot.

81008. ELAEAGNUS MULTIFLORA Thunb. Elaeagnaceae.

No. 307. From the Shizuoka Agricultural Experiment Station, Shizuoka, June 3, 1929. A shrub producing bright-red fruits, about three-fourths of an inch long and half an inch wide, which may make good jelly or marmalade.

81009. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

No. 265. From the Yamato Seed Co., Sapporo, May 25, 1929. *Taikausei ruzan.* A hardy alfalfa used for forage purposes in the Hokushu district.

81010 to 81016. PHASEOLUS spp. Fabaceae.

81010. PHASEOLUS COCCINEUS L. **Scarlet runner.**

No. 268. From the Yamato Seed Co., Sapporo, May 25, 1929. *Benibana ingen.* A variety used as a string bean.

81011. PHASEOLUS LUNATUS L. **Lima bean.**

No. 271. From the Yamato Seed Co., Sapporo, May 25, 1929. *Waisei raima.* A Yamato bush Lima bean.

81012 to 81016. PHASEOLUS VULGARIS L. **Common bean.**

81012. No. 255. From the Sapporo Noyen Seed Co., Sapporo, May 25, 1929. *Otsubu uzura mame.* A large-seeded bean used as a green vegetable.

81013. No. 267. From the Yamato Seed Co., Sapporo, May 25, 1929. *Yatsubusa ingen;* Indian Chief string bean. A variety used as a green vegetable.

81014. No. 269. From the Yamato Seed Co., Sapporo, May 25, 1929. *Manshu ingen.* A variety used as a green vegetable.

81015. No. 270. From the Yamato Seed Co., Sapporo, May 25, 1929. *Shiromaru kintoki ingen.* A round white bean used as a green vegetable.

81016. No. 295. From the Sapporo Engei & Co., Sapporo, May 28, 1929. *Kurouzura mame.* A black variety used as a string bean.

81017. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 298. Obtained in Hakodate, Hokushu, May 30, 1929. *Akaendo.* A red variety used in the dried form.

81006 to 81051—Continued.

81018 to 81020. PRUNUS spp. Amygdalaceae. **Flowering cherry.**

81018. PRUNUS sp.

No. 187. Obtained near the Miyako Hotel, Kyoto, May 24, 1929.

81019. PRUNUS sp.

No. 196. Near the Todai-ji Temple, Nara, May 27, 1929. An early-flowering cherry with rather small, single, pinkish white flowers.

81020. PRUNUS sp.

No. 199. A wild cherry growing at the first stop in the large natural park or mountain drive, near Nara, May 27, 1929. The tree is 8 inches in diameter and 40 feet or so high.

81021 to 81045. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

81021 to 81042. Obtained in Sapporo, Hokushu, May, 1929.

81021. No. 252. From the Sapporo Gobankan. *Aoshiro eda mame.* A greenish white variety used as a green vegetable.

81022. No. 253. From the Sapporo Gobankan. *Kuro mame.* A black variety used as a green vegetable and in making confections.

81023. No. 256. From the Sapporo Noyen Seed Co. *Honen daizu.* A variety used as a green vegetable.

81024. No. 257. From the Sapporo Noyen Seed Co. *Daiyachi ichi go.* No. 1. Daiyachi selection. Used for soy sauce, miso, tofu, roasted beans, and natto.

81025. No. 258. From the Sapporo Noyen Seed Co. *Gokuwase toka eda mame* (earliest 10-day vegetable soybean). Used as a green vegetable.

81026. No. 259. From the Sapporo Noyen Seed Co. *Ishikari shiro daizu.* A variety used for grain, soy sauce, tofu, natto, and miso.

81027. No. 260. From the Sapporo Noyen Co. *Akasaya daizu.* A red-podded soybean used as a green vegetable.

81028. No. 261. From the Sapporo Noyen Seed Co. *Rankoshi daizu.* Used for soy sauce, miso, tofu, roasted beans, and natto.

81029. No. 272. From the Yamato Seed Co. *Chusekurome daizu.* A middle-season, black-eyed soybean used as a green vegetable.

81030. No. 273. From the Yamato Seed Co. *Sousei kuro daizu.* An early black soybean used as a green vegetable.

81031. No. 274. From the Yamato Seed Co. *Banseiosayada mame.* A large-podded, late variety used as a green vegetable.

81032. No. 275. *Ao mame.* A green soybean used as a green vegetable.

81033. No. 276. *Aoshiro daizu.* A greenish white soybean used as a green vegetable.

81034. No. 278. *Kuro daizu.* A black soybean used as a green vegetable.

81006 to 81051—Continued.

81035. No. 279. From the Ghoyu Game Co. A mixture of varieties used in the manufacture of soy sauce.

81036. No. 289. *Aoii, Aoiiro daizu.* A greenish white variety used as a green vegetable.

81037. No. 290. *Kurakake daizu* (saddle soybean). Used as a green vegetable.

81038. No. 291. From the Taishoen Seed Co. *Sousei eda mame.* An early soybean used as a green vegetable.

81039. No. 293. From the Aizawa Seed Co. *Aoshiro daizu.* A greenish white soybean used as a green vegetable.

81040. No. 294. From the Aizawa Seed Co. *Cha mame* (tea soybean). Used as a green vegetable bean.

81041. No. 297. From the Aizawa Seed Co. *Kuro daizu.* A black soybean used as a green vegetable and also in making sweet bean paste and candied beans.

81042. No. 299. From the Sapporo Engei & Co. *Kurakake daizu* (saddle soybean). Used as a green vegetable.

81043 to 81045. Obtained in Hakodate, Hokushu, May 30, 1929.

81043. No. 300. *Ao daizu.* A green soybean used as a green vegetable.

81044. No. 401. *Akita daizu.* A selected yellow soybean used in making bean curd, soy sauce, natto, and roasted beans.

81045. No. 402. *Kurotsuya otsub daizu.* A black glossy soybean used as a green vegetable and in making bean confections.

81046. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 277. From the Shoyu Co., Sapporo, May 27, 1929. A mixture of wheat varieties grown in Hokushu; especially suitable in the manufacture of soy sauce.

81047 to 81049. VICIA FABA L. Fabaceae. **Broadbean.**

Obtained at the Sapporo Noyen Seed Co., Sapporo, May 25, 1929.

81047. No. 262. *Nisum Sora mame.* The 2-inch horse bean. Used for food in the green and dried forms.

81048. No. 263. *Sousei Sora mame.* An early broad bean used as a green vegetable and when mature for confections.

81049. No. 264. *Otafuku mame.* A broad bean used as a green vegetable, and the dried beans are roasted and sugared.

81050. VICIA HIRSUTA (L.) S. F. Gray. Fabaceae. **Vetch.**

No. 197. From Nara, May 27, 1929. A small vetch.

81051. VICIA ANGUSTIFOLIA Grufberg. **Vetch.**

No. 306. Collected on park grounds near Unebi, May 28, 1929. A small vetch.

81052. GARCINIA BENTHAMI Pierre. Clusiaceae.

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received July 9, 1929.

A small, evergreen, rapidly growing tropical tree, closely related to the mangosteen (*Garcinia mangostana*), native to low altitudes in the Philippine Islands. The edible fruits are very similar to those of the mangosteen except that they are slightly smaller, bright red, and have very acid flesh. They are probably suited for making preserves.

For previous introduction see No. 68179.

81053. TERMINALIA EDULIS Blanco. Combretaceae.

From San José, Mindoro, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received July 8, 1929.

Dalinsi. A large and rather ornamental tropical evergreen tree up to 75 feet high, widely distributed throughout the Philippines. The smooth, dark red fruits, about an inch in diameter and resembling small plums, have a pleasant mildly acid flavor and should make good jelly.

81054. PHASEOLUS COCCINEUS L. Fabaceae. **Scarlet runner.**

From Sapporo, Hokushu, Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received July 2, 1929.

No. 266. From the Yamato Seed Co., May 25, 1929. *Sakiwake ingen* (separate blooming string bean). Used as a green vegetable.

81055. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Khartum, Anglo-Egyptian Sudan, Africa. Seeds presented by H. B. Gephardt, American Mission, Deleib Hill, Nalakei. Received July 9, 1929.

An erect shrublike plant, 4 to 6 feet high, which may prove useful in improving the soil and also as a fodder plant. The natives use it for food, but it seems to be inferior to the Egyptian kind.

81056. CRACCA TOXICARIA (Pers.) Kuntze (*Tephrosia toxicaria* Pers.). Fabaceae.

From Peru. Seeds presented by W. J. Dennis, Iowa City, Iowa. Received July 8, 1929.

For previous introduction and description see No. 80932.

81057 to 81071.

From Kwangsi, China. Seeds collected by R. C. Ching and presented by Dr. Alfred Rehder, Arnold Arboretum, Jamaica Plain, Mass. Received July 10, 1929.

81057. ACER sp. Aceraceae. **Maple.**

No. 8458.

81058. CORNUS sp. Cornaceae. **Dogwood.**

81059. ILLICIUM sp. Magnoliaceae.

81060. LITHOCARPUS sp. Fagaceae.

No. 8111.

81057 to 81071—Continued.

81061. LITHOCARPUS sp. Fagaceae.

No. 8345.

81062. MAGNOLIA sp. Magnoliaceae.

81063. RAPHIOLEPIS sp. Malaceae.

81064. STYRAX sp. Styracaceae.

No. 8415.

81065. (Undetermined.)

No. 8480.

81066. (Undetermined.)

No. 7682.

81067. (Undetermined.)

No. 8090.

81068. (Undetermined.)

81069. (Undetermined.)

81070. (Undetermined.)

81071. (Undetermined.)

81072. PISTACIA CHINENSIS Bunge (*P. philippinensis* Merr. and Rolfe). Anacardiaceae. **Chinese pistache.**

From Mountain Province, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received July 12, 1929.

A large deciduous tree, sometimes reaching a height of 80 feet, native to central and western China. The pinnate leaves, about 9 inches long, consist of 10 to 12 narrow, oval leaflets. Because of its glossy green foliage which becomes brilliant crimson in autumn and its rather rapid growth this is a valuable shade tree for mild-wintered regions.

For previous introduction see No. 74678.

81073. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

From Gambia, British West Africa. Seeds presented by A. J. Brooks, Director, Department of Agriculture. Received July 13, 1929.

An African form of the famous Palmyra palm of India. Though a slow grower, it is a very handsome palm when old. In as much as it grows in the dry coastal regions of Ceylon, is apparently able to withstand any amount of lime, and is said to have been used successfully as a binder for sand dunes, it may prove of real value in the calcareous soils of southern Florida. In the number of uses to which it is put in Ceylon it rivals the coconut. A delicate sugar is made from the sap, which flows in abundance from its inflorescence when cut. The seeds are germinated and the young subterranean hypocotyl is used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance, and when ripe exhales a delicate fragrance. The hull is eaten by the Tamils of Ceylon.

For previous introduction see No. 78616.

81074 to 81208.

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, Superintendent, La Mortola. Received April 25, 1929. Numbered in August, 1929.

81074 to 81208—Continued.

81074 to 81099. AGAVE spp. Amaryllidaceae.

81074. AGAVE ALBICANS Jacobi.

No. 50. A trunkless, cespitose agave, native to Mexico, with spreading, glaucous thin oblanceolate leaves about a foot long with close-set minute brown marginal prickles and a terminal needlelike small spine. The reddish green paired flowers are a little over an inch long and are on a spike 3 feet high.

For previous introduction see No. 79462.

81075. AGAVE AUREA Brandegee.

No. 51. A stemless plant with a rosette of about 50 gray-green, narrow-lanceolate leaves about 3 feet long, armed with unequally triangular often upcurved prickles and ending in a chestnut-colored spine an inch long. The numerous golden-yellow flowers are borne on a scape about 5 feet high. Native to Lower California.

81076. AGAVE BRACHYSTACHYS Cav.

No. 52. A trunkless agave with a thick rhizome and a rosette of linear-lanceolate green or grayish leaves a foot or more long, with margins scarcely prickly. The scape, 3 feet or more high, bears a small dense cluster of greenish flowers. Native from southern Mexico to Guatemala.

81077. AGAVE BRACTEOSA S. Wats.

No. 53. A trunkless agave with 3-sided, gray, sigmoidally spreading spineless leaves about 20 inches long, and rather small flowers on a scape 3 to 5 feet high. Native to New Mexico.

81078. AGAVE CANTALA (Haw.) Roxb.

No. 54. A variety with a short, thick stem bearing an aloelike cluster of large fleshy leaves and a tall flower stalk on which grow a large number of small bulbils. The spiny edged leaves are grouped compactly around the stem and terminate in a hard, sharp spine.

For previous introduction see No. 51206.

81079. AGAVE CHIAPENSIS Jacobi.

No. 55. A trunkless agave, probably native to southern Mexico, with upcurving lanceolate green leaves 2 or even 3 feet long, with rather small brown prickles and a narrow-grooved stout spine. The scape is 4 or 5 feet high.

81080. AGAVE CHLORACANTHA Salm-Dyck.

No. 56. An agave which develops with age into a densely cespitose mass 3 or 4 feet wide. The bright-green, fleshy, narrow leaves, reflexed at the middle point, are 2 feet or less in length, with a small fine terminal spine. The greenish flowers are on a scape about 6 feet high. Probably a native of Mexico.

81081. AGAVE FILIFERA Salm-Dyck.

No. 57. The oblong-lanceolate leaves of this Mexican agave are upcurved-spreading and 1 to 2 feet long, termi-

nating in an openly grooved spine. The maroon flowers, over an inch long, are in a stout dense cluster on a scape 10 to 15 feet high.

81082. AGAVE FRANZOSINI Baker.

No. 58. An agave with roughish white recurved ascending lanceolate leaves up to 8 feet long, armed with dark-gray marginal prickles and a large terminal spine. The tall green flower stem, 30 or 40 feet high, bears flowers over 3 inches long. It is probably native to Mexico.

For previous introduction see No. 79464.

81083. AGAVE GHIESBRECHTII Koch.

No. 59. A short-trunked agave with lanceolate, spreading, upcurved leaves a foot long, with moderately large prickles and an inrolled spine. Probably native to southern Mexico.

81084. AGAVE HOOKERI Koch.

No. 61. The rosette of leaves formed by this agave is 5 feet in diameter and 4 feet high. The narrow stout leaves are over 3 feet long, with a stout horny terminal spine 1¼ inches long and irregularly triangular prickles of variable size and shape. Probably native to Mexico.

81085. AGAVE LOPHANTHA Scheide.
Crested agave.

No. 63. An agave, native to eastern Mexico, with spreading, glossy, green lanceolate leaves a foot or more long, with small hooked marginal prickles, and terminating in a grooved brown spine. The flowers, 1½ inches long, are borne on a spike 9 to 15 feet high.

For previous introduction see No. 79465.

81086. AGAVE LURIDA Ait.

No. 64. A short-stemmed or stemless plant with a large dense rosette of lanceolate, leathery, fleshy, gray-green leaves 3 feet long, with a slender spine and small prickles. The greenish flowers are borne on a scape 15 to 20 feet high. Probably native to Mexico.

81087. AGAVE OBLONGATA Jacobi.

No. 65. A trunkless agave with fleshy bright-green oblong-lanceolate leaves 2 feet long, terminating in a conical horny spine and with small, chestnut-brown triangular prickles. The inflorescence is 4 feet high. Probably native to Mexico.

81088. AGAVE OUSSELGHEMIANA Jacobi.

No. 66. A trunkless cespitose plant, related to *Agave albicans,* with spreading glaucous thin oblanceolate leaves about a foot long, with a small needlelike spine and close-set brown prickles. The reddish green paired flowers are on a scape scarcely 3 feet high. Probably native to Mexico.

81089. AGAVE PICTA Salm-Dyck.

No. 62. A large Mexican agave, of the section Americanae, which develops a rosette up to 10 feet across and 7 feet high, composed of 30 to 40 leaves. These are dark gray-green, often reflexed at the middle, 5 to 7 feet long, with a yellow margin set with numerous straight prickles and an awl-shaped terminal spine about 2 inches long. The bright yellow-green flowers are borne in a large open panicle on a scape 25 to 30 feet high.

81090. AGAVE POLYACANTHA Haw.

No. 67. A cespitose plant, native to southern Mexico, with lanceolate, upcurving leaves sometimes 3 feet long, terminating in a stout spine and margined with close-set brown prickles. The flowers, 2 inches long, are in a spikelike inflorescence 4 to 5 feet high.

For previous introduction see No. 79466.

81091. AGAVE ROEZLIANA GILBEYI Trelease.

No. 60. A fleshy stemless agave, related to *Agave horrida,* with a simple rosette of 25 to 35 upright thick, hard-fleshed, gray, lanceolate-oblong leaves 8 inches to a foot long. The rather distant slender marginal prickles are often nearly 2 inches long, and the terminal spine is 1½ inches long. Native to Mexico.

81092. AGAVE RUPICOLA Regel.

No. 68. A cespitose plant with fleshy, spreading, grayish green, broadly lanceolate leaves up to 2 feet long, armed with small close-set dark prickles and a slender weak spine. The brownish green flowers 1½ inches long are on a scape about 10 feet high. Native to eastern Mexico.

81093. AGAVE SALMIANA Otto.

No. 69. An agave with gray-green, very thick leaves about 3 feet long, with an elongated gray terminal spine and triangular marginal teeth. The scape is covered with long, somewhat spreading bracts. Native to Mexico.

For previous introduction see No. 79467.

81094. AGAVE SARTORI Koch.

No. 70. The stem of this Mexican agave becomes a foot high with age. The deep-green spreading upright leaves, up to 2 feet long, are narrow lanceolate with a small horny terminal spine and small, close-set triangular prickles. The yellowish flowers, over an inch long, are on a scape 3 to 4 feet high.

81095. AGAVE SCHOTTII Engelm.

No. 71. A cespitose agave, native to southern Arizona, with linear-triangular leaves 6 inches to a foot in length and curved yellow flowers an inch or more long, scented like tuberoses, on a slender scape 4 feet high.

81096. AGAVE TERRACCIANOI Pax.

No. 72. A stemless agave with numerous narrowly lanceolate green leaves, spotted pale red and margined with small horny teeth. The greenish yellow flowers are borne in a dense spike on a scape 5 feet high. Probably native to Mexico.

81097. AGAVE VARIEGATA Jacobi.

No. 73. A stemless cespitose plant with a rosette of 20 to 25 upcurved, linear-lanceolate, rather fleshy leaves 1½ feet long. The greenish flowers are on a scape 3 to 5 feet high. Native to northeastern Mexico.

81074 to 81208—Continued.

81098. AGAVE VERSCHAFFELTII Lem.

No. 74. A variety with leaves 3 inches wide by 6 to 8 inches long, glaucous, tipped with red-brown spines and armed with long, rusty teeth on large, fleshy prominences.

For previous introduction see No. 47583.

81099. AGAVE WERCKLEI Weber.

No. 75. A stemless plant with fleshy, glaucous, bluish or white leaves abruptly upcurved above the base, about 6 feet long and 6 inches wide, armed with triangular straight brown teeth and terminating in a brown spine over an inch long. The chrome-yellow flowers are borne on a scape 25 feet tall. Native to Costa Rica.

81100. ALLIUM NEAPOLITANUM Cirillo. Liliaceae. **Onion.**

No. 83. A bulbous plant about a foot and a half high, with flat linear leaves about as long as the stem and ornamental white flowers with a scent like that of the English hawthorn. Native to southern Europe.

For previous introduction see No. 78985.

81101. ALLIUM ROSEUM L. Liliaceae. **Onion.**

No. 84. A plant about a foot high, with strap-shaped leaves rolled inward at the top and pale lilac-rose flowers produced in umbels. Native to southern Europe.

For previous introduction see No. 58881.

81102 to 81142. ALOE spp. Liliaceae.

81102. ALOE ABYSSINICA × STRIATA.

No. 85.

81103. ALOE AFFINIS Berger.

No. 86. A stemless aloe with fleshy ensiform leaves 8 to 10 inches long, with sinuate-dentate margins set with horny triangular teeth. The cylindrical racemes of red flowers are on a stout-branched inflorescence. Native to the Transvaal.

81104. ALOE ARBORESCENS FRUTESCENS Link.

No. 87. A shrubby variety with the habit of *Aloe arborescens natalensis*, but lower. The thick glaucous leaves are about 18 inches long, and the inflorescence is unbranched.

81105. ALOE ARBORESCENS MILLERI Berger.

No. 88. A tree 12 feet or more high, with a stout unbranched trunk. The sword-shaped, reflexed, dark-green fleshy leaves, mostly clustered at the summit of the trunk, are 2 feet or more long. The bright-red flowers, 1½ inches long, are borne in a dense raceme. Native to South Africa.

81106. ALOE ARBORESCENS NATALENSIS (Wood and Evans) Berger.

No. 89. A shrubby variety, branching from the base. Each branch ends in a dense rosette of leaves; these are linear-lanceolate, falcate, with curved marginal prickles, and are 18 to 30 inches long. The bright-red cylindrical flowers are in dense racemes. Native to South Africa.

81074 to 81208—Continued.

81107. ALOE ARBORESCENS PACHYTHYRSA Berger.

No. 90. A shrubby variety, stouter than *Aloe arborescens natalensis*, with denser gray-green foliage. The flowers are about 2 inches long, borne on curved ascending scapes 2 feet or less high.

81108. ALOE ARBORESCENS UCRIAE (Terr.) Berger.

No. 91. A shrubby variety about 3 feet high, with numerous spreading falcate, green leaves, 2 feet long, armed with curved triangular marginal teeth.

81109. ALOE ARBORESCENS VIRIDIFOLIA Berger.

No. 92. A shrubby variety with rather flat green leaves nearly 2 feet long and a branched inflorescence.

81110. ALOE BREVIFOLIA Mill.

No. 93. A stemless succulent with a dense rosette of triangular-lanceolate glaucous leaves 3 to 4 inches long, with small white marginal prickles and pale-red flowers in a simple dense raceme. Native to South Africa.

81111. ALOE BREVIFOLIA DEPRESSA (Haw.) Baker.

No. 94. A more robust form of the preceding, with leaves 6 inches long which are less glaucous.

81112. ALOE BREVIFOLIA SERRA (DC.) Berger.

No. 95. An aloe, native to South Africa, with a rosette of 30 to 40 lanceolate-deltoid leaves, 4 to 5 inches long, armed with white, horny, triangular prickles one-tenth of an inch high. The bright-red flowers are in a simple dense raceme.

81113. ALOE BRUNNTHALERI Hort.

No. 96. A horticultural name for which a place of publication or a description has not been found.

81114. ALOE CAESIA Salm-Dyck.

No. 97. An aloe with a stem 10 to 12 feet high, bearing at the summit a dense rosette of very glaucous, lanceolate leaves a foot long, margined with red when young. The raceme of bright-red flowers is borne on a simple peduncle a foot long. Native to South Africa.

81115. ALOE COMOSA Marl. and Berger.

No. 98. A stout subtropical tree 5 or 6 feet high, with an unbranched trunk crowned by a dense rosette of spreading glaucous, narrow, sword-shaped leaves a foot or more long. Native to Cape of Good Hope.

81116 and 81117. ALOE ERU Berger.

81116. No. 99. A large plant, native to tropical Africa, with a branched stem scarcely 2 feet high and very fleshy, recurved, pale glossy green, sword-shaped leaves about 2 feet long. The orange or yellow flowers, three-fourths of an inch long, are borne on a branched inflorescence 3 to 6 feet high.

81117. No. 100. Variety *erecta*. A form with narrower leaves, spotted when young and red margined.

81118. ALOE FEROX Mill.

No. 101. A perennial native to South Africa. It has a thick stem 10 to 15 feet high and a rosette of curved glaucous, lanceolate leaves 2 feet long by 5 inches wide and half an inch thick. The upper and lower surfaces are prickly, and the purple margins are armed with large red-brown teeth. The flowering stem is 4 feet high, and the greenish yellow flowers with smoky tipped segments are 1 to 2 inches long.

For previous introduction see No. 77217.

81119. ALOE GRANDIDENTATA Salm-Dyck.

No. 102. A short-stemmed fleshy plant with a dense rosette of 12 to 20 bright-green lanceolate leaves a foot or more long, with crowded brown-tipped marginal teeth. The pale-red or reddish yellow flowers are in three to seven racemes on a stout peduncle 1½ to 2 feet long. Native to South Africa.

81120. ALOE GREATHEADII Schoenland.

No. 103. A fleshy plant from the Kalahari region of South Africa. The stem is about a foot high, with a terminal dense rosette of lanceolate, dark shining-green leaves up to 9 inches long. The whitish flowers are in dense racemes in a branching inflorescence 2 to 4 feet high.

81121. ALOE HETERACANTHA Baker.

No. 105. A succulent plant with a stem a foot high and 15 to 30 lanceolate green or red tinted leaves 6 to 12 inches long, in a dense rosette. The short-tubular bright-red flowers are in a dense raceme on a peduncle 1 to 3 feet long. Native to South Africa.

81122. ALOE JOHNSTONII Baker.

No. 106. A stemless succulent plant with a globose rootstock and 8 to 12 erect linear thin leaves 1 to 1½ feet long, channelled along the upper surface. The dense capitate raceme of pale-pink flowers is on a simple, stiffly erect peduncle 1½ feet high. Native to British East Africa.

81123. ALOE LATERITIA Engler.

No. 107. A short-stemmed aloe with very thick, lanceolate, white-spotted leaves about 10 inches long with rather large horny-tipped deltoid marginal teeth. The brick-red flowers are in clusters at the ends of the branches of the peduncle. Native to Mozambique.

81124. ALOE LATIFOLIA Haw.

No. 108. The glossy green oblong-lanceolate leaves of this aloe are a foot or less long, with brown horny marginal prickles. The bright reddish yellow flowers, an inch long, are on a stout, simple or forked peduncle 1 or 2 feet long. Native to South Africa.

81125. ALOE MACROCARPA Tod.

No. 109. A short-stemmed aloe with a dense rosette of lanceolate, thin, green leaves 1½ feet long; the margins are reddish white and set with

rather large deltoid teeth. The red flowers are in oblong racemes on a peduncle 3 feet high. Native to northeastern Africa.

81126. ALOE PERCRASSA Tod.

No. 110. An aloe native to northeastern Africa. It develops a round cluster of narrow, sword-shaped, fleshy, deep-green, sometimes spotted leaves, up to 2½ feet long, with small brown marginal teeth. The red flowers are in racemes about a foot long on a branched peduncle 3 feet high.

81127. ALOE PERRYI Baker.

No. 111. A nearly stemless plant with a stem scarcely an inch high and a rosette of lanceolate, pale glaucous-green leaves 7 to 8 inches long. These are furnished with very small brown horny marginal teeth. The flowering stalk is a foot and a half high. Native to the island of Socotra.

81128. ALOE PSEUDOPICTA Berger.

No. 113. A stemless aloe with spreading, narrow, triangular, thick, fleshy, pale-green leaves up to a foot long, with reddish triangular marginal teeth. The light-red flowers are in a rather lax cylindrical raceme on a scape 2 feet high. A hybrid grown at La Mortola, Ventimiglia, Italy.

81129. ALOE PURPURASCENS (Ait.) Haw.

No. 112. The stem of this plant is 2 to 3 feet long below the dense rosette of 40 to 60 sword-shaped leaves. These are 1½ feet long, very glaucous, turning purple when old, and armed with deltoid white horny marginal prickles. The reddish flowers are in a simple dense receme a foot long. Native to South Africa.

81130. ALOE RUBROLUTEA Schinz.

No. 114. A tropical succulent native to southwestern Africa, with a stout simple trunk 7 to 12 feet or more high, bearing a dense rosette of narrow-ensiform leaves up to 2 feet long and light-red flowers in a branched inflorescence a foot high.

81131. ALOE RUBROVIOLACEA Schweinf.

No. 115. An unbranched aloe, hardly 3 feet high, with a thick, curved stem terminated by a dense rosette of triangular, purplish, fleshy leaves about 2 feet long and light-red flowers 1½ inches long in dense racemes on a forked inflorescence 2 feet high. Native to Arabia.

81132. ALOE RUNCINATA Berger.

No. 116. A dense cespitose aloe with lanceolate green or purplish leaves 16 inches long, armed with stout triangular horny marginal teeth. The stout branched scape, about 3 feet high, bears racemes of light-red flowers. Probably a native to South Africa.

81133. ALOE SALMDYCKIANA Schult. f.

No. 117. A succulent, native to South Africa, with a stem 10 to 12 feet high bearing at the summit a dense rosette of 30 to 40 dull-green, sword-shaped leaves 1½ to 2 feet long. The bright-red cylindrical flowers are in a dense raceme a foot long, on a scape about the same length.

81074 to 81208—Continued.

81134. ALOE SAPONARIA (Ait.) Haw.

No. 118. An aloe, native to the Cape of Good Hope, which grows in cespitose clusters, with ascending, oblong-lanceolate acuminate leaves about 7 inches long, often reddish with pale blotches and with large confluent brown marginal teeth. The red flowers are in a branched inflorescence 1 or 2 feet high.

For previous introduction see No. 79471.

81135. ALOE SCHIMPERI Tod.

No. 119. A fleshy aloe with oval-lanceolate glaucous-green lineate leaves a foot long, furnished with a thin reddish horny border and crowded minute marginal teeth. The stout-branched peduncle, 2 to 3 feet high, bears short crowded racemes of bright-red flowers. Native to Egypt.

81136. ALOE SPECIOSA Berger.

No. 120. A hybrid aloe, of unknown parentage, cultivated at La Mortola, Ventimiglia, Italy. It is short-stemmed, branching from the base, having triangular-acute dark-green leaves about 8 inches long, with small incurved marginal prickles. The light-red flowers, nearly 2 inches long, are on a stout 3-branched peduncle 20 inches high.

81137. ALOE SPINOSISSIMA Berger.

No. 121. A handsome hybrid aloe, nearly stemless, with a dense rosette of erect, long-acuminate leaves armed with white marginal teeth and about a foot long. The light-purplish flowers are in an elongated cylindrical raceme nearly a foot in length.

81138. ALOE STRAUSSII Berger.

No. 122. A stemless plant, native to Tanganyika, with a rosette of fleshy, lanceolate-deltoid, dark-green spotted leaves 8 inches long and pale-red flowers on a simple scape 18 inches high.

81139. ALOE STRIATA Haw.

No. 104. Variety *Hanburiana*. A fleshy plant with a short stem, 1 to 2 feet in old plants, and a rosette of 12 to 20 oblong-lanceolate, glaucous leaves 1½ to 2 feet long, with a cartilaginous reddish margin. The bright-red flowers are in capitate racemes on a stout much-branched inflorescence. Native to the coast of South Africa.

81140. ALOE STRIATULA Haw.

No. 123. An erect shrubby plant 3 to 7 feet high, with fleshy, linear-lanceolate leaves 8 inches long, in small rosettes terminating the branches. The light-yellow flowers are in dense racemes a foot high. Native to southeastern Cape of Good Hope.

81141. ALOE SUPRALAEVIS Haw.

No. 124. An aloe with a stem 5 or 6 feet high, crowned by a dense rosette of sword-shaped fleshy leaves which are 1 to 2 feet long and armed with triangular horny marginal prickles one-seventh of an inch long. The reddish flowers are in a dense raceme 6 inches to a foot long. Native to South Africa.

81074 to 81208—Continued.

81142. ALOE WINTERI Berger.

No. 125. A hybrid between *Aloe salmdyckiana* and *A. arborescens frutescens*, developed in the garden of L. Winter, Bordighera, Italy. It is an almost cespitose woody plant with numerous upright-spreading, sword-shaped leaves 2 feet long, with horny margins armed with triangular teeth. The light-yellow flowers are in a dense raceme 10 inches long.

81143. BAUHINIA GRANDIFLORA Juss. Caesalpiniaceae.

No. 203. A small tree up to 20 feet high, with subcordate leaves slightly lobed at the apex and tomentose beneath. The large, pure-white flowers, opening at night, are borne in clusters of one to three on axillary peduncles. Native to Peru.

81144 to 81147. BERBERIS spp. Berberidaceae. **Barberry.**

81144. BERBERIS ACTINACANTHA Mart.

No. 209. An evergreen shrub, native to Chile, 3 to 4 feet high, with 3-parted to 5-parted often leaflike spines, broadly ovate, spiny margined leaves, fascicles of three to six fragrant deep-yellow flowers, and dark fruits.

For previous introduction see No. 76554.

81145. BERBERIS CHITRIA D. Don.

No. 211. A spiny half-evergreen shrub, 6 feet or less high, with oblong leaves 1 to 3 inches long, deep-yellow or reddish flowers in long-stemmed panicles, and ovoid, purple berries. Native to the Himalayas.

For previous introduction see No. 73530.

81146. BERBERIS GLOBOSA Benth.

No. 213. A spiny evergreen shrub, 6 to 8 feet high, with rigid, mucronate leaves a little more than an inch long and one-fourth of an inch wide, yellow flowers a little larger than those of the common barberry, and globular fruits about the size of a small pea. Native to the Andes of Colombia.

For previous introduction see No. 44524.

81147. BERBERIS LYCIUM Royle.

No. 216. A half-evergreen shrub, 10 feet high, with narrow bright-green leaves and pale-yellow flowers followed by ovoid violet berries. Native to northern India.

For previous introduction see No. 79004.

81148. CESTRUM PARQUI L'Her. Solanaceae. **Chilean cestrum.**

No. 344. A semihardy, nearly glabrous shrub native to Chile. The leaves are lanceolate to oblong, and the long, tubular flowers are sessile, in open panicles, greenish yellow, and very fragrant at night. It is much grown in warm countries where it blooms continuously.

For previous introduction see No. 47401.

81149. CESTRUM SUBEROSUM Jacq.

No. 345. An erect glabrous shrub 5 feet high, with ill-smelling flat oblong-oval leaves up to 4 inches long, and

81074 to 81208—Continued.

sulphur-yellow flowers in axillary and terminal racemes. Native country unknown.

81150 to 81152. CYTISUS spp. Fabaceae. **Broom.**

81150. CYTISUS FILIPES Webb and Berth.

No. 614. An upright nearly leafless shrub with very slender stems and branches, native to the island of Teneriffe, Canary Islands. The few trifoliolate leaves are made up of linear-lanceolate, nearly glabrous leaflets, and the rather large, fragrant, pure-white flowers are in axillary clusters.

For previous introduction see No. 65008.

81151. CYTISUS HILLEBRANDTII (Christ) Briq.

No. 615. A suffruticose plant with long slender hairy stems and trifoliolate hairy leaves. Native to the Canary Islands.

81152. CYTISUS RACEMOSUS EVERESTIANUS (Carr.) Rehd.

No. 613. This very free-flowering form of the Easter broom, *Cytisus racemosus*, is a pubescent shrub up to 6 feet high, with grooved branches, persistent trifoliolate leaves of obovate leaflets, and deep-yellow flowers in long loose terminal and lateral racemes. A garden hybrid.

81153. DIMORPHOTHECA ECKLONIS DC. Asteraceae. **Cape-marigold.**

No. 651. A robust and erect subshrub 2 feet or more high, with crowded linear-lanceolate leaves, and terminal flower heads having rays 1½ inches long, which are white above and purplish below. Native to South Africa.

81154. ECHEVERIA AMOENA De Smet. Crassulaceae.

No. 671. A nearly stemless succulent with small dense rosettes of thick leaves and slender scapes 4 to 8 inches high, bearing 1-flowered to 8-flowered racemes of red flowers. Native to Mexico.

81155. ECHIUM CALLITHYRSUM Webb. Boraginaceae.

No. 685. A robust woody or treelike perennial with strongly nerved leaves and thyrsoid spikes of pale red flowers. Native to the Canary Islands.

81156. ENCEPHALARTOS LEHMANNI Lehm. Cycadaceae.

No. 700. A cycad with a smooth cylindrical trunk and a crown of pinnate leaves having glaucous lanceolate opposite leaflets 5 to 7 inches long, each tipped with a brown spine. Native to South Africa.

81157 to 81166. GASTERIA spp. Liliaceae.

81157. GASTERIA ACINACIFOLIA (Jacq.) Haw.

No. 776. A nearly stemless succulent plant with a 2-ranked rosette, 2 to 14 inches across, of 3-edged acute dark glossy green leaves having scattered paler dots. The reddish flowers,

81074 to 81208—Continued.

1 to 2 inches long, are borne on a stalk about 4 feet high. Native to South Africa.

81158. GASTERIA ANGULATA (Willd.) Haw.

No. 777. A succulent plant with a rosette of leaves 8 to 10 inches long and 2 inches wide, slightly concave on each face and one or both edges angularly doubled; dark green with small confluent white spots. The flower stem is about 3 feet high, bearing curved tubular red flowers scarcely an inch long. Native to South Africa.

81159. GASTERIA BREVIFOLIA Haw.

No. 778. A succulent herb, native to South Africa, with a very short leafy stem densely crowded with oblong glossy leaves 4 inches long and racemes of tubular red flowers an inch long.

For previous introduction see No. 78204.

81160. GASTERIA CARINATA (Mill.) Haw.

No. 779. A nearly stemless succulent plant with thick, spreading, triangular leaves 2 inches wide at the base and 6 inches long, grooved above, dull green with coarse whitish warts. The flower stalk is 2 to 3 feet high and is often branched. Native to South Africa.

81161. GASTERIA CHEILOPHYLLA Baker.

No. 780. A succulent with a stem about 2 inches long and 14 to 18 leaves in a spirally twisted rosette. The nearly erect, sword-shaped leaves are 9 to 12 inches long, sometimes doubled on one edge, and are dark green with copious, confluent, slightly raised white spots. Native to South Africa.

81162. GASTERIA LINGUA (Thunb.) Berger.

No. 781. A succulent, nearly stemless plant with concave oblong 2-edged leaves 2 inches wide at the base and 8 to 10 inches long, green or grayish with more or less banded pale-greenish spots. The simple flower stalk is about 3 feet high. Native to South Africa.

81163. GASTERIA MACULATA (Thunb.) Haw.

No. 782. A succulent with an evident stem on which the tongue-shaped leaves are crowded in twisted ranks. The leaves, 2 inches wide and 6 to 8 inches long, are abruptly sharp pointed, 2-edged or with one margin doubled, and are glossy dark green with oblong white spots. The branched flower stalk is 3 to 4 feet high. Native to South Africa.

81164. GASTERIA MOLLIS Haw.

No. 783. A succulent with a leafy stem 1 to 2 feet high, crowded, spreading, tongue-shaped leaves 3 to 4 inches long, dull green with small immersed spots and tubercles on the edges. The reddish flowers are in a raceme on a simple stem about a foot high. Native to South Africa.

81165. GASTERIA NITIDA (Salm-Dyck) Haw.

No. 784. A succulent with nearly radical triangular-lanceolate leaves 2 inches wide at the base and 6 to 9

81074 to 81208—Continued.

inches long, light glossy green with white-banded spots. The simple flower stalk is about 3 feet high. Native to South Africa.

For previous introduction see No. 78206.

81166. GASTERIA SUBNIGRICANS (Spreng.) Haw.

No. 785. A succulent with the radical leaves in two nearly straight ranks and a simple flower stalk about 3 feet high. The leaves are scarcely an inch wide at the base, 5 to 8 inches long, and green with small separate transversely arranged pale spots.

81167. HAKEA SUAVEOLENS R. Br. Proteaceae.

No. 815. A rounded shrub 8 to 15 feet high, with leaves 2 to 4 inches long, cylindrical, with rigid spinelike tip, occasionally entire, but usually branched into rigid cylindrical lobes and fragrant white flowers. It is an easily grown, drought-resistant, self-protective shrub, and makes a suitable covering for dry hillsides, although it is not deep-rooted and sometimes is inclined to become top-heavy. It is native to Australia.

For previous introduction see No. 42603.

81168. HAWORTHIA ATTENUATA Haw. Liliaceae.

No. 819. A cespitose succulent plant with the leaves in a spiral rosette and a flower stalk about 2 feet high, bearing tubular rosy flowers. The thick sword-shaped leaves, half an inch wide by 3 inches long, are green with the upper face roughened by minute green points and the lower surface with large white tubercles in bands or ridges. Native to South Africa.

81169. HAWORTHIA TORTUOSA PSEUDORIGIDA (Salm-Dyck) Berger (*H. subrigida* Baker). Liliaceae.

No. 822. A succulent with clustered stems up to 6 inches long, bearing small 3-ranked leaves and a flower stalk a foot high with rosy-lined tubular flowers. The dull-green fleshy leaves are 2 inches long and are roughened on both surfaces. Native to South Africa.

81170. HYMENOSPORUM FLAVUM (Hook.) F. Muell. Pittosporaceae.

No. 862. An ornamental evergreen shrub or tree, sometimes becoming 50 feet high, native to Australia. The leaves are up to 9 inches long, and the fragrant flowers, yellow marked with red at the throat, are over an inch across. Its symmetrical pyramidal habit and rapid growth make it promising as a street tree for the Gulf States and California.

For previous introduction see No. 61058.

81171. KALANCHOE CRENATA Haw. Crassulaceae.

No. 917. A succulent perennial, native to tropical Africa, 2 to 6 feet high, with a thick fibrous root, oblong or roundish oval crenate leaves about 2 inches long, and bright-yellow flowers, half an inch long, in terminal and axillary cymes.

For previous introduction see No. 79166.

81074 to 81208—Continued.

81172. KALANCHOE DYERI N. E. Brown. Crassulaceae.

No. 918. One of the most attractive plants of this genus, producing large pure-white flowers, 1½ inches long, in corymbose cymes. The entire plant is 2½ feet high, with large, opposite, green or purplish leaves speckled with white and irregularly and coarsely toothed.

81173. LAVANDULA ABROTANOIDES Lam. Menthaceae. **Lavender.**

No. 947. A herbaceous perennial about 2 feet high, native to the Canary Islands. It has green bipinnate leaves and a branched spike of bluish flowers.

81174. MELALEUCA ACUMINATA F. Muell. Myrtaceae.

No. 1042. A glabrous bushy shrub with slender branches, mostly opposite lanceolate leaves a quarter of an inch long, and lateral clusters of small whitish flowers. Native to Australia.

81175. MELALEUCA CUTICULARIS Labill. Myrtaceae.

No. 1044. A tall shrub or small tree with twisted branches and bark in paperlike layers. The thick, flat, linear-oblong leaves are half an inch long, and the small flowers are grouped in a scaly head. Native to Australia.

81176. MESEMBRYANTHEMUM ACINACIFORME L. Aizoaceae. **Figmarigold.**

No. 1061. A fleshy plant with a jointed stem 2 to 3 feet high, opposite, scimitar-shaped leaves 2 to 3 inches long, with the keel dilated, and purple flowers about 4 inches across, said to be the largest of the genus. The edible fruits, about the size of a gooseberry, are eaten by the natives of South Africa.

For previous introduction see No. 79480.

81177 to 81183. NEOMAMMILLARIA spp. Cactaceae.

81177. NEOMAMMILLARIA DONATII (Berge) Britt. and Rose.

No. 1019. A spherical or somewhat compressed cactus, native to Mexico, which is simple or with few branches in old plants. The summit, somewhat concave, is filled with white hairs through which project dark-brown spines. The tubercles are conical and about one-third of an inch high. The small carmine-red flowers, half an inch across, are mostly near the summit.

81178. NEOMAMMILLARIA ELONGATA (DC.) Britt. and Rose.

No. 1020. An erect cactus 6 to 7 inches high and 1 to 2 inches in diameter, with short tubercles having 16 to 18 yellow radial spines. The flowers are white or yellowish. Native to central Mexico.

81179. NEOMAMMILLARIA MACRACANTHA (DC.) Britt. and Rose.

No. 1016. A depressed-globular cactus, 2 to 6 inches in diameter, with ovoid tubercles crowned by one or two reddish elongated spines up to 2 inches long, and dark-pink flowers about three-fourths of an inch across, borne near the top of the plant. Native to San Luis Potosi, Mexico.

81074 to 81208—Continued.

81180 to 81183. NEOMAMMILLARIA MAGNIMAMMA (Haw.) Britt. and Rose.

A globular cactus 4 inches in diameter, often in a colony of 25 or more, with very milky juice. The conical tubercles, two-fifths of an inch high, are crowned by three to five unequal, stout, horn-colored spines, and the cream-colored flowers are borne in the axils of the tubercles near the top of the plant. Native to central Mexico.

The following are now referred to this species:

81180. No. 1014. *Mammillaria centricirrha.*

81181. No. 1015. *Mammillaria centricirrha krameri.*

81182. No. 1017. *Mammillaria centricirrha.*

81183. No. 1022. *Mammillaria schmidtii.*

81184. NEOMAMMILLARIA RHODANTHA (Link and Otto) Britt. and Rose. Cactaceae.

No. 1018. A cylindrical cactus a foot or less high, dull green, with terete tubercles one-fifth of an inch high, crowned by 15 to 20 white radial spines and 4 to 6 reddish brown central spines. The numerous rose-colored flowers are half an inch across, and the cylindrical red fruits are an inch long. Native to central Mexico.

81185. OLEA CHRYSOPHYLLA Lam. Oleaceae.

No. 1146. A small evergreen tree, closely related to the cultivated olive. Its chief ornamental value lies in the golden color of the undersurfaces of the leaves. Native to East Africa.

For previous introduction see No. 61777.

81186. PANDOREA RICASOLIANA (Tanf.) Baill. Bignoniaceae.

Ricasol pandorea.

No. 1292. An evergreen climbing shrub with pinnate leaves of 7 to 11 ovate, serrate leaflets an inch long, dark green above, pale beneath, and loose terminal panicles of large campanulate flowers 2 inches long, light pink striped with red. Native to South Africa.

For previous introduction see No. 48624.

81187 to 81201. SEMPERVIVUM spp. Crassulaceae. **Houseleek.**

81187. SEMPERVIVUM ARBOREUM L.

No. 1462. Variety *atropurpureum.* Rosettes tinged with dark purple; flowers red.

81188. SEMPERVIVUM AUREUM C. Smith.

No. 1463. A perennial succulent about a foot high, native to the Canary Islands. It has obovate-spatulate leaves and cymes of yellow flowers.

81189. SEMPERVIVUM BERTHELOTIANUM (Bolle) Christ.

No. 1464. A nearly stemless fleshy plant with a dense rosette of yellowish green, narrowly spatulate, white ciliate leaves, and 6 to 10 pale-yellow flowers on a scape a foot or more high. Native to the Canary Islands.

81074 to 81208—Continued.

81190. SEMPERVIVUM CANARIENSE L.

No. 1465. A variety forming immense rosettes of leaves, sometimes 14 inches across, which lie perfectly flat against perpendicular walls of lava rock. When there are many they give the appearance of a lot of large, green dinner plates stuck to the cliffs. From the center of these "plates" arise the flowering racemes and when the "dinner plates" are about to form these racemes they swell out in the middle and become like mammae. The flower clusters are striking but not particularly beautiful since the flowers themselves are greenish in color.

For previous introduction see No. 64593.

81191. SEMPERVIVUM CHLOROCHRYSUM Hort.

No. 1466. A horticultural variety for which a place of publication or description has not been found.

81192. SEMPERVIVUM CILIATUM Willd.

No. 1467. A woody perennial with obovate, acute leaves with the margin cartilaginous-ciliate and white flowers in dense cymes. Native to the Canary Islands.

81193. SEMPERVIVUM CUNEATUM (Webb and Berth.) Christ.

No. 1468. A fleshy evergreen plant 1 to 1½ feet high, with wedge-shaped leaves and terminal cymes of yellow flowers.

81194. SEMPERVIVUM DECORUM (Webb) Christ.

No. 1469. A much-branched shrubby succulent with a wrinkled ashy gray stem and papillose-wrinkled branches. The sessile lanceolate leaves are light greenish pink, paler beneath, and the rose-colored flowers are in a many-flowered corymb. Native to the Canary Islands.

81195. SEMPERVIVUM GLUTINOSUM Ait.

No. 1470. A viscous perennial, 1½ feet high, with large spatulate fleshy leaves and yellow flowers in terminal cymes. Native to Madeira.

81196. SEMPERVIVUM HAWORTHII Salm-Dyck.

No. 1471. A succulent evergreen perennial with a woody stem and yellow flowers. Native to the Canary Islands.

For previous introduction see No. 79184.

81197. SEMPERVIVUM HOLOCHRYSUM Webb and Berth.

No. 1472. A winter-blooming species native to the Canary Islands. It produces great masses of yellow flowers on a flower panicle 2 feet tall. It is a striking landscape plant and is worthy of being grown in southern California and Florida.

81198. SEMPERVIVUM HYBRIDUM Bruegg.

No. 1473. A natural hybrid between *Sempervivum montanum* and *S. doellianum,* closely resembling the latter. Native to Switzerland.

81074 to 81208—Continued.

81199. SEMPERVIVUM POCULIFORME Berg. and Wildem.

No. 1475. A succulent with the oblong-lanceolate basal leaves in a rosette and the stem leaves obovate-spatulate. The simple erect stem bears a glabrous panicle of yellow flowers. Probably native to the Canary Islands.

81200. SEMPERVIVUM URBICUM C. Smith.

No. 1476. A shrubby succulent with a simple stout erect stem about 3 feet high and covered with leaf-scars. The thick pale-green narrowly spatulate leaves are borne in a rosette at the top of the stem. The large pyramidal panicle of pale-yellow flowers is 3 feet high and nearly as broad. Native to the Canary Islands.

81201. SEMPERVIVUM VELUTINUM N. E. Brown.

No. 1477. A succulent plant about 2 feet high, with rosettes 6 to 9 inches broad of crowded spatulate velvety leaves 3 to 4 inches long, grayish green above and with darker green lines beneath. The bright-yellow flowers are in a compact cyme. Known only in cultivation.

81202. SOLANUM PYRACANTHUM Jacq. Solanaceae.

No. 1507. An erect shrubby plant about 3 feet high, with oblong, deeply lobed leaves 6 inches long and spiny along the midrib. The numerous blue flowers are borne in lateral racemes sometimes 6 inches long. Said to be native to tropical Africa.

81203. STAPELIA HANBURYANA Berger and Ruest. Asclepiadaceae.

No. 1528. A freely branching cactus-like plant with obtusely 4-angled stems 2 to 6 inches long. The flowers are 2 to 3 inches broad, rugose inside, greenish yellow evenly marked with small transverse purplish brown spots and lines and edged with the same color. Considered to be a hybrid of some form of *Stapelia variegata*.

81204. STYRAX OFFICINALIS L. Styracaceae. **Snowbell.**

No. 1549. A handsome shrub or low tree, 20 feet high, with hairy broadly oval leaves and numerous white bell-shaped flowers about three-fourths of an inch long, in small clusters. It is native to Europe and Asia Minor.

For previous introduction see No. 77620.

81205. TOONA CILIATA Roemer (*Cedrela toona* Roxb.). Meliaceae. **Toon tree.**

No. 1574. A large tropical tree 50 to 80 feet high, with nearly evergreen foliage and white, honey-scented flowers. The wood, which is used for furniture, carvings, and for making cigar boxes, is very durable and is not attacked by termites. Native to India.

For previous introduction see No. 61766.

81206. WIGANDIA CARACASANA H. B. K. Hydrophyllaceae.

No. 1632. A robust subshrub 9 feet high, with soft golden pubescence, long petioled, broadly ovate, crenate leaves, white tomentose beneath, 18 inches long by 10 inches broad. The broadly campanulate violet flowers are borne in a 1-sided terminal raceme. Native to Venezuela.

For previous introduction see No. 51152.

81207. WIGANDIA URENS (Ruiz and Pav.) H. B. K. Hydrophyllaceae.

No. 1633. A stout erect subshrub covered with dense whitish hairs. The short-petioled, ovate, serrate leaves are 12 inches long by 7 inches broad, and the violet flowers are in a broad terminal raceme. Native to Peru.

For previous introduction see No. 44126.

81208. SEMPERVIVUM YOUNGIANUM (Webb and Berth.) Christ. Crassulaceae. **Houseleek.**

No. 1478. A fleshy plant with a thick woody stem and thick shining dark-green obcordate-spatulate leaves with short hairs along the margins. Native to the Canary Islands.

81074 to 81208—Continued.

81209 to 81217.

From Yemen, Arabia. Seeds presented by Prince Mohamed Saiffal-Islam, Hodeida, through K. S. Twitchell, Aden. Received July 22, 1929.

81209 and 81210. PENNISETUM GLAUCUM (L.) R. Br. (*P. typhoideum* Rich.). Poaceae. **Pearl millet.**

81209. *Balade.*

81210. *Mikawi.*

81211. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

Kishrey.

81212. SESAMUM ORIENTALE L. Pedaliaceae. **Sesame.**

81213 to 81216. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

81213. *Bainey.*

81214. *Gharb.*

81215. *Hombre.*

81216. *Migna.*

81217. ZEA MAYS L. Poaceae. **Corn.**

Hind.

81218. (Undetermined.)

From Peradeniya, Ceylon. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers of the Bureau of Plant Industry, with the Allison V. Armour expedition. Received February 26, 1926. Numbered in September, 1929.

No. 256. Royal Botanic Gardens, January 1, 1926. A beautiful slender-stemmed tall palm with graceful pinnate leaves. Native to Singapore.

81219 to 81229.

From Ariana, Tunis, Africa. Cuttings presented by F. Bœuf, Chef du Service Botanique. Received August 2, 1929.

81219 to 81224. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

81219. *Abiod.*

81219 to 81229—Continued.

81220. *Constantini.*

81221. *Grosse Verte.*

81222. *A la Dame.*

81223. *Ronde Fine.*

81224. *Zaaf.*

81225 to 81229. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

81225. *Chechi.*

81226. *Hatif Musque.*

81227. *Précoce de Boulbon.*

81228. *Senadqui.*

81229. *Luizet.*

81230 to 81265.

From Kirstenbosch, Newlands, near Cape Town, Union of South Africa. Seeds presented by R. H. Compton, Director, National Botanic Gardens. Received July 8, 1929.

Native to South Africa.

81230 to 81247. ERICA spp. Ericaceae. **Heath.**

81230. ERICA ABIETINA L.

An erect glabrous shrub usually about 2 feet high, with virgate branches, densely imbricated incurved linear leaves in fours, and racemose clusters of tubular flowers, yellow with an orange limb.

81231. ERICA BOWIEANA Lodd.

A low shrub with virgate branches a foot long, small thick sulcate leaves crowded in fours, and racemose clusters of tubular flowers below the ends of the branches.

81232. ERICA CURVIFLORA L.

A shrub up to 5 feet high, with stout virgate branches, small linear-lanceolate keeled leaves, and solitary red, orange, or yellow trumpet-shaped curved flowers an inch or more long.

81233. ERICA DIOSMAEFOLIA Salisb.

A low shrub 4 to 8 inches high, with many rigid branches, small sulcate linear-trigonous leaves, and white cyathiform flowers scattered at the ends of the branches.

81234. ERICA GILVA Wendl.

An erect glabrous shrub 2 to 3 feet high, with stout ascending leafy branches, erect or spreading lanceolate leaves, and greenish white tubular flowers about an inch long gathered into lateral clusters.

81235. ERICA GLANDULOSA Thunb.

An erect shrub 2 feet or more high, with all parts covered with gland-tipped hairs. The spreading linear sulcate leaves are in fours, the bracts are foliaceous, and the club-shaped flowers are in clusters of three to five.

81236. ERICA GLAUCA ELEGANS (Andrews) Bolus.

A stout erect entirely glabrous shrub up to 3 feet high, with rigid ascending branches, linear-semiterete curved spreading leaves in threes, half an inch long, and small umbels of dull-red or purple urn-shaped flowers more than half an inch long.

81237. ERICA GLOBOSA Andrews.

An erect shrub 1 to 2 feet high, with long glandular-setose branches, spreading lanceolate leaves with recurved margins, and broadly urn-shaped rosy red flowers in terminal clusters and axillary near the ends of the branches.

81238. ERICA HEBECALYX Benth.

An erect virgately branched shrub with incurved linear sulcate leaves in threes, and club-shaped incurved flowers more than an inch long. The broad softly gray tomentose sepals and bracts give this plant a distinct appearance.

81239. ERICA LAETA Bartl.

A glabrous erect shrub about a foot high, with erect linear sulcate leaves and umbellate clusters of urn-shaped bright-red flowers.

81240. ERICA MAMMOSA L.

An erect shrub up to 4 feet high, with ascending branches which are leafy above and naked below. The scattered linear-lanceolate leaves are in fours, and the purple, red, scarlet, or white tubular flowers are in a loose raceme.

81241. ERICA PINEA Thunb.

An erect shrub a foot high, with stout rigid flexuous branches, scattered incurved linear leaves, and white or yellow club-shaped flowers crowded at the ends of the branches.

81242. ERICA QUADRANGULARIS Salisb.

An erect shrub 12 to 18 inches high, with spreading branches, spreading linear leaves, and an abundance of cyathiform 4-sided rosy or white flowers.

81243. ERICA QUADRISULCATA Hort.

A name for which a place of publication or description has not been found.

81244. ERICA SITIENS Klotzsch.

An erect shrub 1 to 2 feet high, with stout ascending branches, linear usually erect leaves, and urceolate to tubular white or red flowers mostly in fours.

81245. ERICA TAXIFOLIA Bauer.

An erect rigid shrub less than a foot high, with numerous short, straight, pallid branches, erect or spreading linear-trigonous sulcate leaves in threes, and umbellate clusters of broadly urceolate brownish flowers.

81246. ERICA UNICOLOR Wendl.

An erect shrub 3 to 4 feet high, with ascending branches, laxly spreading linear leaves with long hairs, and viscid tubular green flowers.

81247. ERICA VESTITA Thunb.

An erect virgately branched shrub 1 to 3 feet high, crowded erect linear-subtrigonous leaves in sixes, and very small club-shaped white, yellow, rosy, or crimson flowers.

81230 to 81265—Continued.

81248. FAUCARIA TIGRINA (Haw.) Schwantes (*Mesembryanthemum tigrinum* Haw.). Aizoaceae. **Figmarigold.**

An almost stemless perennial with ovate cordate white-marbled glaucous green leaves having upturning edges with long soft ciliated teeth. The large yellow flowers are nearly sessile.

For previous introduction see No. 78226.

81249. GLADIOLUS TRISTIS L. Iridaceae.

A bulbous perennial with three to five strongly ribbed terete leaves a foot long and a lax spike, 2 feet high, of yellowish white, purplish pencilled flowers. This species is said to exhale a delightful lemon perfume at night.

For previous introduction see No. 77224.

81250 to 81265. MESEMBRYANTHEMUM spp. Aizoaceae. **Figmarigold.**

81250. MESEMBRYANTHEMUM AURANTIACUM Haw.

A low fleshy plant about a foot high, with smooth leaves an inch or less long, and orange flowers about 1½ inches wide.

For previous introduction see No. 66813.

81251. MESEMBRYANTHEMUM BLANDUM Haw.

An erect perennial succulent, 2 feet high, with numerous branches, compressed-triangular leaves 2 inches or less long, with minute dots and pale-rose or white flowers 2 inches across.

For previous introduction see No. 79481.

81252. MESEMBRYANTHEMUM BOULUSII Hook. f.

A dwarf stemless succulent plant consisting at maturity of two fully formed dull-gray leaves at right angles to a pair of small withered ones, with one or two sessile yellow and dull-red flowers between them. The hemispherical-trigonal leaves are 2 inches in diameter, and the flowers are 2 to 3 inches across.

81253. MESEMBRYANTHEMUM CALAMIFORME L.

A succulent plant 1 to 2 inches high, with glaucescent-dotted nearly terete subulate leaves about 2 inches long, and dirty white flowers on peduncles an inch long.

81254. MESEMBRYANTHEMUM CONSPICUUM Haw.

A shrubby succulent 1 to 2 feet high, with rigid ascending tortuous branches, crowded incurved triquetrous green leaves, and red flowers on peduncles about 3 inches long.

81255. MESEMBRYANTHEMUM EMARGINATUM L.

A shrubby succulent about 2 feet high, with spreading flexuose branches, scattered semiterete linear leaves, and long-stemmed reddish flowers, in threes, having bidentate petals.

81230 to 81265—Continued.

81256. MESEMBRYANTHEMUM FILAMENTOSUM L.

A semishrubby succulent with angled reddish stems and decumbent branches, crowded dotted scimitar-shaped leaves 1 to 2 inches long, and purplish flowers.

81257. MESEMBRYANTHEMUM GRANULATUM N. E. Brown.

A low fleshy plant, stemless or nearly so, branching at the base and forming a clump half an inch high. The six to eight dull-green leaves are cruciately opposite, crowded, connate, thick at the base, flat above, with obtuse side angles, and acute points. The light-yellow flowers are about an inch across on a terminal peduncle.

81258. MESEMBRYANTHEMUM HETEROPETALUM Haw.

A low succulent with erect-spreading stem and branches and glaucous subfalcate leaves. The pale-red or whitish flowers are solitary.

For previous introduction see No. 79487.

81259. MESEMBRYANTHEMUM INTEGRUM Hort.

A name for which a place of publication or description has not been found.

81260. MESEMBRYANTHEMUM NOBILE Haw.

A nearly stemless succulent with four to six triquetrously clavate leaves 2 to 3 inches long, marked by large elevated tubercles, and nearly sessile yellow flowers 2 inches in diameter.

81261. MESEMBRYANTHEMUM PILLANSII Kensit.

A shrubby plant about 2 feet high, with reddish flattened branches, triangular-compressed leaves up to an inch long, and terminal whitish flowers about 1½ inches across.

81262. MESEMBRYANTHEMUM PRODUCTUM Haw.

A dwarf succulent with erect stems 1 to 2 inches high, with crowded incurved semicylindrical leaves 1 to 2 inches long, and pale rose-colored flowers in twos or threes on peduncles about an inch long.

81263. MESEMBRYANTHEMUM RIGIDICAULE Haw.

A shrubby succulent with angular stems, opposite triquetrous dotted leaves 2 to 3 inches long, and white or rosy flowers about an inch across.

81264. MESEMBRYANTHEMUM RUBRICAULE Haw.

A perennial with erect reddish stems and branches, flat triangular incurved leaves 1 to 2 inches long, and purplish flowers with lanceolate petals.

For previous introduction see No. 77236.

81265. MESEMBRYANTHEMUM SIMPSONII Hort.

A name for which a place of publication or description has not been found.

81266 to 81269.

From Guatemala. Seeds presented by Wilson Popenoe, research department, United Fruit Co., Tela, Honduras. Received August 6, 1929.

81266. COMBRETUM FARINOSUM H. B. K. Combretaceae.

Peineta. A climbing plant bearing red flowers in March. The flowers are arranged in long stiff racemes, giving the common name *peineta* (comb flower).

For previous introduction see No. 49754.

81267. GUAIACUM GUATEMALENSE Planch. Zygophyllaceae.

Guayacan. A small tree, sometimes 30 feet high, with a gnarled and twisted trunk, slender branches, and small, delicate leaves. It thrives in a warm climate with little rain. During February or March the tree comes into flower and is then a mass of lavender-purple, remaining in bloom several weeks. The wood is exceedingly hard and is of value for cabinet purposes. The heartwood is a rich brown, while the sapwood is light yellow; both take a fine polish.

For previous introduction see No. 51407.

81268. MAXIMILIANEA VITIFOLIA (Willd.) Krug and Urb. (*Cochlospermum hibiscoides* Kunth). Cochlospermaceae.

Tecomasuche. A deciduous tree, native to Central America, 35 feet in height, but flowering when only 6 feet high. The alternate leaves have five to seven serrate lobes, and the handsome bright-yellow flowers, 4 inches across, are in terminal clusters.

For previous introduction see No. 80631.

81269. PHYLLOCARPUS SEPTENTRIONALIS Donn. Smith. Caesalpiniaceae.

Flor de Mico. A handsome flowering tree native to eastern Guatemala at altitudes between 1,500 and 2,000 feet. It is of broad spreading habit, 40 to 50 feet high, with small, light-green compound leaves and clusters of small crimson-scarlet flowers borne in great profusion during January and February.

For previous introduction see No. 80696.

81270 and 81271.

From Herradura, Cuba. Seeds presented by Mrs. F. S. Earle. Received August 12, 1929.

81270. ARECASTRUM sp. Phoenicaceae. **Palm.**

A pinnate-leaved palm closely related to the coconut palm.

81271. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

Philippino.

81272. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Sydney, New South Wales, Australia. Seeds presented by H. Wenholz, Director of Plant Breeding, Department of Agriculture. Received August 14, 1929.

Hunter River lucern. This strain does exceptionally well in Sydney, and should

81272—Continued.

be adapted to conditions in the southern United States where Peruvian alfalfa is grown.

81273. ANEMONE ALPINA L. Ranunculaceae.

From France. Seeds presented by D. C. Peattie. Received August 19, 1929.

Collected at the Col du Lautheret, Hautes Alpes, at an altitude of 6,000 feet, August 4, 1929. An alpine herbaceous perennial, native to Europe, with a thickened root, stems 9 to 18 inches high, and smooth or hairy, finely divided leaves. The attractive flowers, borne in small umbellike clusters, are 2 to 3 inches across, usually creamy white inside and purple outside with yellow stamens.

81274. ACROCOMIA SCLEROCARPA Mart. Phoenicaceae. **Macauba palm.**

From Port of Spain, Trinidad, British West Indies. Seeds presented by R. O. Williams, Superintendent and Assistant Botanist, Department of Agriculture. Received August 15, 1929.

A graceful spiny palm, 30 to 45 feet high, with a terminal cluster of narrow, pinnate leaves. It is native to tropical America. When matured the inside of the trunk furnishes excellent starch equal in quality to that of the cassava plant. The leaves yield strong fiber, utilized by the natives of Paraguay for making hammocks. From the yellowish fruits, about an inch in diameter, an excellent edible oil is expressed.

For previous introduction see No. 61385.

81275. HEMEROCALLIS FULVA L. Liliaceae. **Tawny daylily.**

From Japan. Bulbs collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 20, 1929.

No. 696. A double-flowered form growing along a hillside on the road between Shimizu and Yamakita, July 27, 1929.

81276 to 81283. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Galápagos Islands. Seeds obtained by A. K. Fisher, Bureau of Biological Survey. Received August 2, 1929.

81276. GOSSYPIUM sp.

From Hood Island, July 5, 1929.

81277. GOSSYPIUM sp.

From a bird's nest on Charles Island, June 28, 1929.

81278. GOSSYPIUM sp.

From Charles Island, July 5, 1929.

81279. GOSSYPIUM sp.

From Indefatigable Island, June 18, 1929.

81280. GOSSYPIUM sp.

From Indefatigable Island, June 18, 1929.

81281. GOSSYPIUM sp.

From Chatham Island, July 3, 1929.

81282. GOSSYPIUM sp.

From Charles Island.

81276 to 81283—Continued.

81283. GOSSYPIUM sp.

From Charles Island, June 28, 1929. Flowers bright yellow, becoming dark pink with age.

81284. LILIUM sp. Liliaceae. **Lily.**

From Japan. Bulbs collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 1, 1929.

No. 910. Growing on the mountain side, Takaoyama Forest, near Takao, July 8, 1929.

81285. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Landsberg am Warthe, Germany. Seeds obtained from the Deutsche Saatveredelung, through the Bureau of Agricultural Economics. Received August 7, 1929.

Old Frankish lucern, produced in the vicinity of Landsberg.

81286 to 81289. FRAGARIA spp. Rosaceae. **Strawberry.**

From Sydney, New South Wales, Australia. Plants presented by C. G. Savage, Director of Fruit Culture of the New South Wales Department of Agriculture. Received August 9, 1929.

81286. FRAGARIA sp.

Creswell.

81287. FRAGARIA sp.

Fandelcino.

81288. FRAGARIA sp.

Malakoff.

81289. FRAGARIA sp.

Phenomenal.

81290 to 81296.

From Cape Town, Union of South Africa. Presented by W. S. Duke & Co. Received August 7, 1929.

81290. ANTHOLYZA REVOLUTA Burm. f. Iridaceae.

Seeds of a slender-stemmed plant, closely allied to gladiolus, bearing bright-red flowers in a few-flowered, very lax spike. Native to southwestern South Africa.

For previous introduction see No. 62799.

81291 to 81293. GLADIOLUS spp. Iridaceae.

81291 and 81292. GLADIOLUS ALATUS L.

A very interesting plant with flowers of a delightful fragrance not unlike that of the sweetbrier. The three upper petals are bright orange-scarlet, and the three lower ones are yellowish tipped with orange scarlet. The bulbs are not larger than ordinary peas and can not remain long out of the ground. Native to South Africa.

For previous introduction see No. 54304.

81291. Bulbs.

81292. Seeds.

81290 to 81296—Continued.

81293. GLADIOLUS sp.

Painted Ladies. Bulbs.

81294. IXIA sp. Iridaceae.

Seeds.

81295. SPARAXIS TRICOLOR (Curtis) Ker. Iridaceae. **Wandflower.**

Seeds of spring-flowering bulbous plant, native to South Africa, with flat sword-shaped leaves and stems a foot high, bearing clusters of funnel-shaped flowers 1 to 2 inches across which vary in color from nearly white through rose, carmine, crimson, to dark purple excluding blue and yellow, but always having a yellow blotch at the base of each segment.

81296. VELTHEIMIA VIRIDIFOLIA Jacq. Liliaceae.

Seeds of a bulbous perennial, native to South Africa, with oblong wavy-margined radicle leaves a foot long and a leafless scape 1 to 2 feet high, mottled with purple. The reddish yellow tubular flowers, with greenish tips, are over an inch long and are borne in a dense raceme 3 to 6 inches long.

81297. LILIUM sp. Liliaceae. **Lily.**

From Hanabata, Japan. Bulbs collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 12, 1929.

No. 959. Obtained from an agricultural fair in the public-school building, July 19, 1929. A species with edible bulbs of relatively uniform size and shape.

81298 to 81307.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 7, 1929.

81298. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

No. 925. Collected on Miharadai Mountain peak, July 9, 1929. A grass which makes a very tight sod, but only a short growth.

For previous introduction see No. 80941.

81299. PHYTOLACCA ACINOSA Roxb. Phytolaccaceae. **Pokeberry.**

No. 956. Collected in Tokujima Temple grounds, near Umeshimamura, July 15, 1929. A stout, almost woody, pokeberry closely resembling the native American pokeberry and used as greens in the same manner. Native to China and Japan.

81300 to 81304. RUBUS spp. Rosaceae.

81300. RUBUS sp.

No. 913. Collected on a mountain top, at an altitude of 1,300 feet, near Takao, July 8, 1929. A species with very large canes, nearly 2 inches in diameter, and bright-red fruits.

81301. RUBUS sp.

No. 914. Collected on a mountain top near Takao, July 8, 1929. A bright golden-yellow raspberry.

81302. RUBUS sp.

No. 915. From a trail near the mountain top in Takaoyama Forest, near Takao, July 8, 1929. A species with orange-yellow fruits.

81298 to 81307—Continued.

81303. RUBUS sp.

No. 916. From plants along a mountain trail near the top of Takaoyama, July 9, 1929. A fairly prolific species with quite large canes and bright-red fruits.

81304. RUBUS sp.

No. 918. From plants along a trail near the top of Takaoyama, Takao, July 9, 1929. A species with orange fruits.

81305 and 81306. SAMBUCUS RACEMOSA L. Caprifoliaceae. **European red elder.**

For previous introduction see No. 77614.

81305. No. 552. Between Shoji and Kofu, June 28, 1929. A small red-berried variety with quite large, showy clusters.

81306. No. 917. From plants along a mountain trail on Takaoyama, Takao, July 9, 1929. Bright-red seeds.

81307. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

No. 487. Near Matsushima Mura, July 6, 1929. Mixed varieties of green-seeded and yellow-seeded varieties used in making miso.

81308 to 81342. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Sydney, Australia. Cuttings presented by P. H. Goldfinch, general manager of the Colonial Sugar Refining Co. Received August 10, 1929.

81308. No. 3.	**81326.** No. 47.
81309. No. 5.	**81327.** No. 49.
81310. No. 6.	**81328.** No. 51.
81311. No. 12.	**81329.** No. 212.
81312. No. 14.	**81330.** No. 215.
81313. No. 15.	**81331.** No. 256.
81314. No. 17.	**81332.** No. 257.
81315. No. 21.	**81333.** No. 259.
81316. No. 23.	**81334.** No. 265.
81317. No. 25.	**81335.** No. 266.
81318. No. 26.	**81336.** No. 267.
81319. No. 27.	**81337.** No. 268.
81320. No. 30.	**81338.** No. 283.
81321. No. 31.	**81339.** No. 284.
81322. No. 32.	**81340.** No. 285.
81323. No. 33.	**81341.** No. 287.
81324. No. 34.	**81342.** No. 288.
81325. No. 43.	

81343. EUGENIA PUNGENS Berg. Myrtaceae. **Guabiyu.**

From El Saff, Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station. Received August 12, 1929.

A bushy species native to South America, with pungent leaves and myrtlelike flowers. The black fruits, generally in pairs, are about an inch across with sweet, yellow flesh inclosing one or two large green seeds.

For previous introduction see No. 47987.

81344 to 81355.

From Tiflis, Georgia, Union of Socialistic Soviet Republics. Seeds presented by the director of the botanic garden. Received August 12, 1929.

81344. BELLEVALIA ALBANA Hort. Liliaceae.

A horticultural name for which a place of publication or a description has not been found.

81345. HEDERA COLCHICA Koch. Araliaceae. **Colchis ivy.**

A high-climbing vine with the young growth covered by golden-yellow scales, broadly cordate almost entire bright-green leaves of firm texture, and small umbels of greenish yellow flowers in paniculate clusters, followed by black fruits. It is native to the Caucasus region.

81346 to 81349. IRIS spp. Iridaceae.

81346. IRIS CAUCASICA Hoffm.

A dwarf iris belonging to the Juno section, with a stem 3 to 15 inches high, mostly hidden by the crowded clasping leaves, which have white horny margins. The pale or bright-yellow flowers, one to four on each stem, have ovate outer segments with a broad rhomboidal claw, small auricles, and a toothed or ciliated crest; the inner segments are oblanceolate. Native to the Caucasus region.

For previous introduction see No. 79909.

81347. IRIS IBERICA Hoffm. **Iberian iris.**

A dwarf iris of the oncocyclus section, with falcate leaves 3 to 6 inches long and a large flower on a stem 3 to 4 inches high. The reflexing spoon-shaped falls are obovate, 2 inches broad, and pale brown, closely veined and blotched with purple brown with a dark velvety signal patch. The standards are overarching, varying from pure white to nearly the color of the outer segments. Native to the Caucasus region.

For previous introduction see No. 79910.

81348. IRIS TASCHIA Hort.

A name for which a place of publication or description has not been found.

For previous introduction see No. 79918.

81349. IRIS sp.

Received as *Iris sulfurea*, which is usually a synonym of *I. pumila;* but the seeds received do not agree with the material of that species.

81350. MUSCARI SZOVITSIANUM Baker. Liliaceae. **Grape-hyacinth.**

A perennial with a large bulb which sends up several linear leaves 5 to 6 inches long and several scapes 4 to 5 inches high, with racemes of faintly odorous bright-blue urn-shaped flowers one-sixth of an inch across. Native to the Caucasus region.

81344 to 81355—Continued.

81351. MUSCARI TENUIFLORUM Tausch. Liliaceae. **Grape-hyacinth.**

A grape-hyacinth from south-central Europe, similar to *Muscari comosum*, but generally smaller, with upright narrow-linear leaves as long as the stem, which is about a foot high. The lower fertile flowers, in a cylindrical raceme, are apple green with deep-brown, slightly recurved segments, while the numerous sterile flowers form a rather dense long raceme above.

81352. PAEONIA MLOKOSEWITSCHI Lomakin. Ranunculaceae.

A herbaceous perennial peony with dark bluish green biternate leaves with red nerves and margins and yellow flowers 4 to 5 inches in diameter, which have numerous stamens and purple stigmas. This peony, considered the handsomest of the yellow-flowered forms, is native to the central Caucasus.

For previous introduction see No. 79924.

81353. PAEONIA TRITERNATA Pall. Ranunculaceae. **Peony.**

A herbaceous peony, native to Siberia, usually about 3 feet high, with triternate leaves and purple flowers.

For previous introduction see No. 79926.

81354. PARROTIA PERSICA (DC.) Meyer. Hamamelidaceae. **Persian parrotia.**

A shrub or small tree, up to 15 feet high, with spreading branches and ovate-oblong coarsely crenate leaves, 3 to 4 inches long, which turn scarlet, yellow, and orange in the autumn and remain on the branches a long time. The flower heads, which appear before the leaves, are rather inconspicuous except for the pendent purple stamens; the ovoid fruits are half an inch long with two recurved lobes. Native to Persia.

For previous introduction see No. 49136.

81355. PISTACIA MUTICA Fisch. and Mey. Anacardiaceae. **Terebinth.**

A deciduous tree up to 35 feet high, with pinnate foliage. It is sometimes used as a stock for pistache (*Pistacia vera*). Native to the eastern Mediterranean region.

For previous introduction see No. 73984.

81356 to 81381. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Pasuruan, Java. Cuttings obtained through the Java Sugar-Producers' Association's experiment station, by R. D. Rands and George Arceneaux, Bureau of Plant Industry. Received August 13, 1929.

81356. *EK.*

81357. *21–C 3 Soerabnjamploeng.*

81358. *32–C 73.*

81359. *90–F.*

81360. *P. O. J. 2722.*

81361. *2753.*

81362. *2775.*

81356 to 81381—Continued.

81363. *2802.*

81364. *2806.*

81365. *2822.*

81366. *2875.*

81367. *2887.*

81368. *2940.*

81369. *F. 1081.*

81370. *F. 1087.*

81371. *G. 107.*

81372. *H. 581* (No. 1).

81373. *H. 581* (No. 2).

81374. *SW III.*

81375. *SW 499.*

81376. *Glog Djatiroto.*

81377. *Glog Kloet.*

81378. *Glog hepandjen.*

81379. *Glog Kletak I.*

81380. *Glog pasoeroean.*

81381. *Glog Tabongo.*

81382 to 81405. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From India. Seeds presented by the deputy director of gardens at Saharanpur, through the Director of the Agricultural Research Institute, Imperial Department of Agriculture in India, at Pusa, and Robert Frazer, consul general, Calcutta. Received August 12, 1929.

81382 to 81390. From Agra District.

81382. No. 1. *Mau.* A round greenish yellow melon with dark-green bands heavily overlain with white nettings. Flesh green and of fairly good flavor.

81383. No. 2. *Mau.* Similar to No. 1, but flesh orange.

81384. No. 3. *Bangar.* An oval round dull-red melon heavily overlaid with white netting; flesh orange, not sweet, and having very little flavor.

81385. No. 4. *Reti.* Dull-red and yellow melon with straw-colored bands; flesh pale lemon, slightly sweet, with very little flavor. Apparently two or three mixed varieties.

81386. No. 5. *Burhana (1).* Round yellow melon slightly overlaid with dull-red bands and a little white netting. Flesh greenish white and of fairly good flavor.

81387. No. 6. *Burhana (2).* A round, somewhat flat melon which is rich yellow splashed dull red and overlaid with white netting; flesh pale orange and of fairly good flavor.

81388. No. 7. *Burhana (3).* A round yellow and dull-red melon with dark-green bands overlaid with white netting; flesh orange and of fairly good flavor.

81389. No. 8. *Burhana (4).* A round yellow melon with green and orange bands overlaid with white netting; flesh orange and of fairly good flavor.

81390. No. 9. *Burhana (5).* A round dull-orange melon with green bands

81382 to 81405—Continued.

and heavily overlaid with white netting; flesh green shading to orange near the seed and of fairly good flavor.

81391. No. 10. From Ambala. An early variety producing bright-yellow fruits with very dark-green bands; flesh pale cream and of fairly good flavor. Many of the fruits are distinctly triangular in shape.

81392. No. 11. From Lucknow. *Chitla.* A round, flat melon which is light green with yellow spots and green splashes; flesh white and of fairly good flavor.

81393. No. 12. From Lucknow. *Khurra.* A round, rough-skinned melon which is yellow and slightly splashed dull red overlaid with white netting; flesh pale orange and of good flavor.

81394. No. 13. From Lucknow. *Sarda.* A round and somewhat flat, yellow melon with very narrow depressed bands of pale green; flesh pale orange and of good flavor.

81395. No. 14. From Lucknow. *Sufaida (1).* A round, flat, yellow melon with white flesh of good flavor. It is one of the best and most popular varieties.

81396. No. 15. From Lucknow. *Sufaida (2).* A round, flat, pale-cream melon slightly spotted and splashed with pale yellow; flesh white and of good flavor. It is probably a variety of *Sufaida (1).*

81397. No. 16. From Rampur State. *Chitla Jaldar.* A round, pale-yellow melon splashed with dull red irregularly overlaid with white netting; flesh pale yellow tinged with orange, very little flavor and not very sweet.

81398. No. 17. From Piranpur, Rampur State. *Geeala.* A long oval, bright-yellow melon heavily overlaid with white netting; flesh pale orange, rather juicy, but with little flavor.

81399. No. 18. From Tomri, Rampur State. *Jaldar Red.* A roundish oval, dull-red melon with dark-green bands heavily overlaid with white netting; flesh pale yellow tinted orange, not sweet and with no flavor.

81400. No. 19. From Rampur State. *Dhai Seera.* Long oval, pale yellow melon with orange bands; flesh pale orange, slightly sweet, and with very little flavor.

81401. No. 20. From Sitaria, Rampur State. *Red Jaldar.* Oval, dull orange-red melon overlaid with white netting; flesh pale yellow tinged with orange, not sweet, and with a very insipid flavor.

81402. No. 21. From Ghatampur, Rampur State. *Surkha Jaldar.* A round melon which is dark orange-red to yellow and dull orange with orange and green bands, overlaid with white netting; flesh pale yellow tinged with orange, fairly sweet, and of fairly good flavor.

81403. No. 22. From Saharanpur district. *Jalalabad.* A round flat melon which is rich golden yellow with juicy, sweet, white flesh of good flavor. Probably a variety of the Lucknow *Sufaida.*

81404. No. 23. From Saharanpur district. *Patair (1).* A round, somewhat flat,

81382 to 81405—Continued.

bright-yellow melon with dark-green bands; flesh green, fairly sweet, and of fairly good flavor.

81405. No. 24. From Saharanpur district. *Patair (2).* A handsome dark-red melon with yellow bands; flesh pale orange, fairly sweet, and of fairly good flavor.

81406 to 81417.

From Java. Seeds collected by R. D. Rands and George Arceneaux, Bureau of Plant Industry. Received August 13, 1929.

81406. ALBIZZIA FALCATA (L.) Backer (*A. moluccana* Miquel). Mimosaceae.

A rapid-growing tropical Asiatic tree with large feathery leaves and small globular flower heads. It is used for shade in coffee plantations.

For previous introduction see No. 75973.

81407 and 81408. BRADBURYA PLUMIERI (Turp.) Kuntze (*Centrosema plumieri* Turp.). Fabaceae.

A tropical ornamental vine, native to Brazil, with white and red flowers. It is of value as a green manure.

For previous introduction see No. 77622.

81407. No. 1.

81408. No. 2.

81409 and 81410. BRADBURYA PUBESCENS (Benth.) Kuntze (*Centrosema pubescens* Benth.). Fabaceae.

A leguminous vine, native to tropical America, with trifoliolate leaves and small yellowish flowers. It is used as a cover crop.

81411. CASSIA HIRSUTA L. Caesalpiniaceae.

An erect, annual herb covered with long hairs. The compound leaves are made up of three to five pairs of ovate leaflets 2 to 3 inches long, and the yellow flowers are borne in axillary racemes. It is native to Brazil.

For previous introduction see No. 47353.

81412. CASSIA LESCHENAULTIANA DC. Caesalpiniaceae.

A low diffuse perennial native to the tropical Himalayas, with slender branches and finely divided leaves.

For previous introduction see No. 72591.

81413. CRACCA CANDIDA (DC.) Kuntze (*Tephrosia candida* DC.). Fabaceae.

A low shrub with slender branches and large clusters of reddish or white flowers. Native to the Himalayas.

For previous introduction see No. 76096.

81414. CRACCA VOGELII (Hook. f.) Kuntze (*Tephrosia vogelii* Hook. f.). Fabaceae.

A shrubby legume native to tropical Africa. The leaves are macerated and thrown into the water to kill fish.

For previous introduction see No. 76098.

81406 to 81417—Continued.

81415. CROTALARIA ANAGYROIDES H. B. K. Fabaceae.

A shrubby leguminous plant, up to 6 feet high, used as a cover crop in the East Indies. Native to tropical America.

For previous introduction see No. 76099.

81416. CROTALARIA USARAMOENSIS Baker f. Fabaceae.

A crotalaria, native to East Africa, which has proved very successful as a green manure when grown in alternation with corn, producing large quantities of vegetation rich in nitrogen. In the cinchona plantations it endures partial shade and forms a low dense growth, binding the edges of the terraces. It is a very strong grower 8 feet or more high, with long spikes of yellow flowers.

For previous introduction see No. 76101.

81417. MIMOSA INVISA Mart. Mimosaceae.

A bushy tropical plant native to Brazil, about 3 feet high with feathery leaves and rose-colored flowers. It is used as a green manure.

For previous introduction see No. 77623.

81418 to 81426. CROTALARIA spp. Fabaceae.

From Honolulu, Hawaii. Seeds presented by F. G. Krauss, assistant director of agricultural extension, University of Hawaii. Received August 14, 1929.

81418 and 81419. CROTALARIA ANAGYROIDES H. B. K.

For previous introduction and description see No. 81415.

81418. No. 158. Originally from the experiment plantation, Serdang, Federated Malay States.

81419. No. 167. Originally from the College of Agriculture, University of the Philippine Islands.

81420. CROTALARIA INCANA L.

No. 15528. Originally sent to Hawaii from Savannah, Ga. A somewhat shrubby plant covered with soft gray pubescence and bearing elongated racemes of yellow flowers. It is native to tropical America.

For previous introduction see No. 76089.

81421. CROTALARIA JUNCEA L. **Sunn hemp.**

No. 166. Originally from the College of Agriculture, University of the Philippine Islands.

For previous introduction see No. 76100.

81422. CROTALARIA MAXILLARIS Klotzsch.

Originally sent to Hawaii from Savannah, Ga., under F. P. I. No. 60302. A plant 1½ to 2½ feet high, branching along the entire main stem, with broad leaflets and bright-yellow flowers. It matures in four months.

81418 to 81426—Continued.

81423. CROTALARIA RETUSA L.

Originally sent to Hawaii from Savannah, Ga., under F. P. I. No. 36969. A tropical, annual legume with yellow flowers.

For previous introduction see No. 73932.

81424. CROTALARIA USARAMOENSIS Baker f.

No. 165. Originally from the College of Agriculture of the University of the Philippine Islands.

For previous introduction and description see No. 81416.

81425. CROTALARIA sp.

Originally from Kona, Hawaii.

81426. CROTALARIA sp.

A wild species growing at the University of Hawaii farm B–2, of possible value as a cover crop.

81427 to 81429.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received August 19, 1929.

81427. EUGENIA CAPULI (Schlecht. and Cham.) Berg. Myrtaceae.

A shrub or small tree, native to Mexico, with slender branches, dark-green lanceolate leaves 1 to 2 inches long, racemose clusters of small white flowers, and small subglobose edible fruits which are red at first but turn black in ripening.

81428. PINUS OOCARPA Schiede. Pinaceae. **Pine.**

A white pine 36 to 45 feet high, with a round compact head and stout branches, bright-green leaves 7 to 11 inches long, and cones 2 to 4 inches long, persistent, pendent or spreading, ocher-yellow, often tinged with gray or green. Native to western and central Mexico.

For previous introduction see No. 50651.

81429. TABEBUIA PENTAPHYLLA (L.) Hemsl. Bignoniaceae.

A handsome tropical deciduous tree, about 35 feet high, native to Central America. During its flowering period, from January to March, the numerous large clusters of pink flowers make the tree very attractive.

For previous introduction see No. 73286.

81430 to 81435. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From Ariana, near Tunis, Tunisia, Africa. Seeds presented by F. Bœuf, Chief, Botanical Service. Received August 15, 1929.

81430. *Lin Denaiff* (Nord de La France).

81431. *Lin de Tunisie No. 15.*

81432. *Lin de Tunisie No. 16.*

81433. *Lin Lino Grande* (Italie).

81434. *Lin de Safi* (Maroc).

81435. *Lin Malabrigo* (Italie).

81436. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Scions collected by R. K. Beattie, Bureau of Plant Industry. Received August 19, 1929.

No. 840. Ayabe Machi Agricultural Experiment Station, Kyoto, January 13, 1929. *Goku wase.*

81437. PONGAMIA PINNATA (L.) W. F. Wight (*P. glabra* Vent.). Fabaceae.

From the West Indies. Seeds collected by Allison V. Armour. Received August 19, 1929.

A tall erect shade tree or sometimes a climbing shrub, native to tropical Asia, with compound leaves composed of four to seven pairs of oblong leaflets and simple racemes of white flowers. The woody pods are about one-fourth of an inch thick and 1½ inches long. Because of its bright, handsome foliage this tree has been recommended as an ornamental for subtropical regions. It is said to withstand hurricanes.

For previous introduction see No. 79543.

81438. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Landsberg am Warthe, Germany. Seeds obtained through the Bureau of Agricultural Economics. Received August 19, 1929.

Hungarian.

81439 to 81447.

From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, United States Department of Agriculture. Received August 20, 1929.

81439. AQUILEGIA sp. Ranunculaceae. **Columbine.**

No. 618. Seeds obtained from plants with lavender and yellow flowers, in the woods and open field near Lake Yamanaka, July 23, 1929.

81440. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

No. 958. Seeds obtained at an agricultural fair held in the public-school building in Hanabata, July 19, 1929.

Yatsubusa. A beautiful brownish yellow cucumber about 10 inches long and 3 inches in diameter, which received second prize at the fair.

81441. FESTUCA sp. Poaceae. **Fescue grass.**

No. 615. Seeds obtained from plants along the trail near Lake Yamanaka, July 23, 1929.

81442. LILIUM CORDIFOLIUM Thunb. Liliaceae. **Lily.**

No. 681. Bulbs collected between Gotemba and Fujima, July 25, 1929.

For previous introduction see No. 75677.

81443 to 81446. RUBUS spp. Rosaceae.

81443. RUBUS sp.

No. 663. From plants on a hillside between Gotemba and Fujima, July 25, 1929. A low-spreading vine bearing bright-red fruits which separate very easily from the receptacle.

81444. RUBUS sp.

No. 695. Obtained from plants along the trail near Subashiri, July 26, 1929.

81445. RUBUS sp.

No. 697. From plants along the road on a hillside between Shimizu and Yamakita, July 27, 1929. Fruits bright red and very sweet.

81446. RUBUS sp.

No. 698. From plants along the road between Shimizu and Yamakita, July 27, 1929. Fruits are a deep purple when mature.

81447. VACCINIUM sp. Vacciniaceae.

No. 638. Seeds from plants growing in lava soil in the woods along a mountain trail near Subashiri, in the Mount Fuji region, at an altitude of 2,600 feet, July 24, 1929. A shrub up to 12 feet high.

81448 to 81472. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Sydney, New South Wales, Australia. Cuttings presented by P. H. Goldfinch, general manager of the Colonial Sugar Refining Co. Received August 24, 1929.

81448. No. 1.	**81461.** No. 213.
81449. No. 22.	**81462.** No. 214.
81450. No. 37.	**81463.** No. 217.
81451. No. 55.	**81464.** No. 218.
81452. No. 62.	**81465.** No. 221.
81453. No. 99.	**81466.** No. 222.
81454. No. 101.	**81467.** No. 223.
81455. No. 104.	**81468.** No. 262.
81456. No. 105.	**81469.** No. 263.
81457. No. 203.	**81470.** No. 269.
81458. No. 204.	**81471.** No. 273.
81459. No. 209.	**81472.** No. 282.
81460. No. 210.	

81473. FICUS CASSIDYANA Elm. Moraceae. **Fig.**

From Manila, Philippine Islands. Fruits presented by William H. Brown, Director, Bureau of Science. Received July 22, 1929.

A small, erect, tropical tree, 25 feet high, with spreading branches and grayish white bark. It is native to the Philippine Islands. The dark-green membranous, broadly heart-shaped scabrous leaves are about 8 inches long and are mostly at the ends of the twigs. The brown-hairy flat-obovoid fruits are 3 inches across.

81474. EUGENIA PUNGENS Berg. Myrtaceae. **Guabiyu.**

From El Saff, Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station. Received August 24, 1929.

For previous introduction and description see No. 81343.

81475 and 81476. PETREA spp. Verbenaceae.

From Port of Spain, Trinidad, British West Indies. Seeds presented by R. O. Williams, Superintendent, St. Clair Experiment Station. Received August 24, 1929.

81475. PETREA ARBOREA H. B. K.

A vigorous tropical climber with oblong leaves about 4 inches long and harsh to the touch, and trusses of blue star-shaped flowers. It blooms more or less throughout the year, but is covered with flowers during the early spring. Native to Colombia.

For previous introduction see No. 50665.

81476. PETREA VOLUBILIS L.

A woody climber native to tropical South America and the West Indies. The beautiful white flowers are borne in loose pendent sprays which hang gracefully from the slender arching branches. These combined with the rigid green leaves produce a striking effect.

For previous introduction see No. 54325.

81477 to 81482. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From Magyarovar, Hungary. Seeds presented by Emil Grabner, Director, Royal Hungarian Plant-Breeding Institute. Received August 28, 1929.

White-bearded winter varieties.

81477 and 81478. Originated in the wheat-breeding experiments under the direction of the Royal Hungarian Plant-Breeding Institute. The selection of pure line and saving of good seeds for sowing was carried out at the home of Count Dr. Paul Eszterházy in Esterhazy, Comitat Sopron. They are long-stemmed, prolific varieties which are useful for intensive cultivation.

81477. *Eszterházai No. 11.*

81478. *Eszterházai No. 18.*

81479 and 81480. Hybrids of Hungarian and foreign winter wheat varieties originated by Dr. Endre Pap, Mindszentpuszta, Post Sarszentmiklos. Suited for extensive cultivation.

81479. *Mindszentpusztai No. 403.*

81480. *Mindszentpusztai No. 609.*

81481 and 81482. Developed from Hungarian Theiss wheats through individual selection by Head Agriculturist Elmer Székács, Budapest.

81481. *Székács No. 1055.*

81482. *Székács No. 1242.*

81483. ATTALEA GOMPHOCOCCA Mart. Phoenicaceae. Palm.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received August 27, 1929.

An ornamental palm, 20 to 30 feet high, crowned by a magnificent cluster of large leaves, with very numerous linear or linear-lanceolate leaflets, bright green above and pale beneath. The fruit is fibrous coated. Native to Central America.

For previous introduction see No. 47440.

81484 to 81487. GOSSYPIUM BARBADENSE L. Malvaceae. Cotton.

From Ariana, near Tunis, Tunisia, Africa. Seeds presented by F. Bœuf, Chief, Botanical Service. Received August 15, 1929.

81484. No. 21 (2).

81485. No. 48.

81486. No. 60.

81487. No. 75.

81488 and 81489. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From France. Seeds obtained from Tezier Frères, Paris. Received August 30, 1929.

81488. *Luzerne de Provence.* From the valley of the Rhone.

81489. *Luzerne de Provence.* From the Alps.

81490. LIBERTIA IXIOIDES (Forst. f.) Spreng. Iridaceae.

From Nelson, Auckland, New Zealand. Seeds presented by A. Wilkinson, New Zealand Alpine and Rock Garden Society. Received August 22, 1929.

A herbaceous perennial, native to New Zealand, with a short creeping rhizome which forms a compact clump like a beardless iris. It has rigid coriaceous linear leaves a foot long, and large panicles of small white flowers on a stem 2 feet high.

For previous introduction see No. 77564.

81491 to 81493. FICUS spp. Moraceae. Fig.

From Summit, Canal Zone. Cuttings presented by J. E. Higgins, Plant Introduction Garden. Received August 27, 1929.

81491. FICUS CONORA King.

A tree, native to New Guinea, with softly pubescent branchlets, lanceolate entire leaves 7 inches long, pubescent beneath, and turbinate fruits an inch in diameter, borne on long flexuose leafless branches arising at the base of the trunk.

For previous introduction see No. 80047.

81492. FICUS INVOLUTA (Liebm.) Miquel.

A spreading tree with thick triangular branches and leathery elongate-obovate leaves 7 or 8 inches long. It is native to tropical America.

81493. FICUS MITROPHORA Warb.

A West Indian tree 15 to 60 feet high, with thick branches and dense foliage. The oblong obtuse sessile leaves are about 4 inches long, and the globose fruits are scarcely half an inch in diameter.

81494. GNETUM INDICUM (Lour.) Merr. (*G. funiculare* Blume). Gnetaceae.

From Manila, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila, at the request of P. J. Wester, Bureau of Agriculture. Received August 19, 1929.

Bulso. A tropical woody vine with brick-red fruits in bunches like grapes, each containing a nut which, when roasted, has

81494—Continued.

the flavor of a chestnut. The nuts should not be eaten raw. Native to the Philippines.

For previous introduction see No. 72597.

81495. BAMBUSA LONGISPICULATA Gamble. Poaceae. **Bamboo.**

From the Chittagong Hill Tracts, Bengal, India. Seeds presented by R. N. Parker, Forest Botanist, Forest Research Institute and College, Dehra Dun, United Provinces. Received August 22, 1929.

This species appears to differ from *Bambusa tulda* only in the larger spikelets.

81496 and 81497. ZEPHYRANTHES spp. Amaryllidaceae. **Zephyrlily.**

From Paget East, Bermuda. Seeds presented by J. C. Nauen, Horticulturist, Agricultural Station, Department of Agriculture. Received August 31 and September 3, 1929.

81496. ZEPHYRANTHES CARINATA Herbert.

A bulbous perennial with linear leaves and a scape about a foot high, bearing a single rosy flower 3 to 5 inches across and 3 inches long. Native to the West Indies. It is said to be the largest and choicest of the rosy-flowered zephyrlilies and blooms in the summer. The seeds were mixed with *Zephyranthes eggersiana* when received.

For previous introduction see No. 62796.

81497. ZEPHYRANTHES EGGERSIANA Urban.

A bulbous perennial related to *Zephyranthes citrina*, with very narrow leaves about 6 inches long and small yellow flowers an inch or so across. Native to the West Indies.

81498. ARTOCARPUS COMMUNIS Forst. Moraceae. **Breadfruit.**

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Plant Introduction Gardens. Received September 5, 1929.

A tropical tree 30 to 40 feet high, with viscid milky juice and leathery ovate leaves 3 feet long, entire at the base but divided above into three to nine lobes. The seeds, which are much the size, shape, and flavor of chestnuts, are roasted and eaten. Native to the Malay Archipelago.

For previous introduction see No. 80555.

81499. SACCHARUM SPONTANEUM L. Poaceae.

From Sumatra. Cuttings obtained from Harold L. Lyon, Department of Botany and Forestry, Experiment Station, Hawaiian Sugar Planters' Association, through Sidney F. Sherwood, Bureau of Plant Industry. Received September 4, 1929.

Variety *gigas*. Collected near Prapat by Messrs. Agee and Mangelsdorf, Hawaiian Sugar Planters' Association.

81500. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Barrington Island, Galápagos Islands. Seeds obtained by A. K. Fisher, Bureau of Biological Survey, United States Department of Agriculture. Received August 22, 1929.

81501. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Mayaguez, Porto Rico. Cuttings presented by Robert L. Davis, agronomist, Porto Rico Agricultural Experiment Station. Received September 4, 1929.

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81502. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Berlin, Germany. Seeds obtained from the Deutsche Landwirtschafts-Gesellschaft, through H. L. Westover, Bureau of Plant Industry. Received September 5, 1929.

Old Frankish lucern.

81503. ARTOCARPUS COMMUNIS Forst. Moraceae. **Breadfruit.**

From Summit, Canal Zone. Plants presented by J. E. Higgins, Plant Introduction Gardens. Received September 13, 1929.

A seedless form of breadfruit.

For previous introduction see No. 81498.

81504. CORDIA GREGGII Torr. Boraginaceae.

From Culiacan, Sinaloa, Mexico. Seeds presented by C. J. Stafford. Received September 9, 1929.

Vara Prieta. A drought-resistant shrub 3 to 9 feet high, with mostly ovate or obovate, coarsely dentate leaves, which are very scabrous, and white flowers borne in few-flowered headlike cymes. A decoction of the leaves is said to be used as a stimulant. Native to central and northwestern Mexico.

81505. AGONIS FLEXUOSA (Willd.) DC. Myrtaceae.

From Melbourne, Victoria, Australia. Seeds presented by F. J. Rae, Director, Melbourne Botanic Gardens. Received September 10, 1929.

A tall evergreen shrub or tree up to 40 feet high, native to Western Australia. The young shoots are silky, and the linear-lanceolate leaves, 2 to 6 inches long, have in their axils small heads of flowers with persistent white petals.

For previous introduction see No. 75542.

81506. CEIBA PENTANDRA (L.) Gaertn. Bombacaceae. **Kapok.**

From Talisay, Cebu, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received September 9, 1929.

A large deciduous tree with pods which contain silky white floss (kapok) used for stuffing mattresses, etc. Although native to tropical America, it is grown extensively throughout tropical Asia.

For previous introduction see No. 74414.

81507. PYCNOSPORA HEDYSAROIDES R. Br. Fabaceae.

From Peradeniya, Ceylon. Seeds presented by F. A. Stockdale, Director, Department of Agriculture. Received September 10, 1929.

An undershrub native to southeastern Asia, with the habit of the meibomias, hav-

81507—Continued.

ing decumbent or ascending branched stems 1 to 2 feet long. The leaves are pinnately trifoliolate with obovate leaflets about an inch long, and the small purplish flowers are in terminal racemes or panicles. It is of value as a cover crop.

81508 to 81510.

From Maragha, Persia. Scions presented by Jalil K. Hashimzade, Teheran, Persia. Received July 18, 1929.

81508. PRUNUS sp. Amygdalaceae. **Plum.**

Kodja Sultan. An early variety of plum.

81509. PRUNUS sp. Amygdalaceae. **Cherry.**

A black cherry.

81510. PYRUS sp. Malaceae. **Pear.**

Norass. An early variety.

81511 and 81512.

From Little River, Fla. Seeds presented by Charles T. Simpson. Received September 16, 1929.

81511. CHRYSALIDOCARPUS MADAGASCARIENSIS Beccari. Phoenicaceae. **Palm.**

A graceful palm, native to Madagascar, about 15 feet high, with pinnate leaves 10 feet long, having the segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see No. 77158.

81512. LINOMA ALBA (Bory) O. F. Cook (*Dictyosperma rubra* Wendl. and Drude). Phoenicaceae. **Palm.**

A slender, spineless, pinnate-leaved palm, 30 feet or more high, resembling Areca in habit. The mature leaves are 8 to 12 feet long. When young this makes a very desirable house palm. Native to tropical Asia.

For previous introduction see No. 61495.

81513. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From New Smyrna, Fla. Cuttings presented by John Y. Detwiler. Received October 9, 1928. Numbered in September, 1929.

The Detwiler guava is large, very thick fleshed, and otherwise of high merit. The flesh is white, smooth in texture, and sweet, with a fair amount of acid. The seeds are small and are restricted to the rather small cavity. In a small specimen of the fruit, examined late in November, which measured 3⅛ by 2¾ inches and weighed 4 ounces, the flesh was nearly three-fourths of an inch thick. The single fruits are said by Mr. Detwiler to attain occasionally a weight of 1 pound.

81514. ELAEOPHORBIA DRUPIFERA (Thonn.) Stapf. Euphorbiaceae.

From Victoriaborg, Akkra, Gold Coast, Africa. Seeds presented by L. A. King-Church, Conservator of Forests. Received September 13, 1929.

A deciduous tree 40 to 50 feet high, with milky juice that may be a source of rubber.

81514—Continued.

The young branches are fleshy and angled, becoming round and woody with age. The thick fleshy obovate leaves are 3 to 8 inches long, with stipular spines; the flowers are similar to those of the euphorbias, and the fleshy fruits vary in size from that of a cherry to a walnut. Native to tropical Africa.

For previous introduction see No. 73010.

81515 to 81527.

From Burma. Seeds collected by Capt. F. Kingdon Ward and presented through S. C. Simms, Director, Field Museum of Natural History, Chicago, Ill. Received September 18, 1929.

81515. ADENIA sp. Passifloraceae.

No. 8473. A climber.

81516. ARISTOLOCHIA sp. Aristolochiaceae.

No. 8756. Obtained at Taungui at altitudes between 4,500 and 5,000 feet. Climbing by means of petioles and twining stems. The seeds are flat, thin, and small.

81517. CITRUS sp. Rutaceae.

No. 9060.

81518. CROTALARIA sp. Fabaceae.

No. 8874. Valley of the Nam Lwe, near Mong Wa.

An undershrub cultivated for its small seeds crowded in fat pods which open explosively. The flowers are dark blue-violet with the standard and wings prettily veined.

81519. CROTALARIA sp. Fabaceae.

No. 9050. From a plateau east of Savanakket, at altitudes between 1,000 and 1,500 feet. An erect undershrub, bearing bright sulphur flowers, which grows on an open savanna.

81520. CROTALARIA sp. Fabaceae.

No. 9059. Coast of Anam. An erect dune species about a foot high.

81521. FICUS sp. Moraceae. **Fig.**

No. 9021. Mekong River, below Luang Prabana, at an altitude of 1,000 feet. A small tree with white flowers and red fruits.

81522. LAGERSTROEMIA sp. Lythraceae.

No. 8870. Valley of the Nam Lwe, near Mong Wa. A small tree, common in thickets, which flowers as a modest-sized bush. The flowers are fragrant, almost white or beautifully flushed with lilac or pink, about an inch across, and are borne in showy heads.

81523. LEUCAENA GLAUCA L. Mimosaceae.

No. 9063. Coast of Anam. An ornamental tropical dune tree with numerous white flowers borne in globular heads.

For previous introduction see No. 43637.

81524. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

No. 8762. Salwin Valley, at an altitude of 800 feet. A large-leaved, small-flowered pink variety, 3 to 5 feet high, growing in the sandy river bed below summer flood level. The flowering stem

81515 to 81527—Continued.

is usually broken off low down, leaving the large basal leaves. At this time (March 21, 1929) the leaves are being harvested.

81525. (Undetermined.)

No. 8800. Lormive, at altitudes between 5,000 and 6,000 feet. A climber covering a garden trellis with a mass of intertwining stems supported by leaf petioles. The flowers are violet or occasionally purple. It is not yet (April 8, 1929) in full bloom, the long straggling shoots bearing numerous buds.

81526. (Undetermined.)

No. 8924–A. Mong Hsing, Haut Laos, at an altitude of 2,000 feet. A large shrub very common and conspicuous in thickets; it is 6 to 8 feet high and is used for hedges. The 3-seeded berries are at first bright orange, turning scarlet, and are slightly aromatic when crushed.

81527. (Undetermined.)

No. 9056. A small tree bearing fruits the size of a gooseberry, with smooth, purple skin, purple pulp, and containing many small seeds.

81528. FICUS CARICA L. Moraceae. **Fig.**

From the valley of the Roja, Alpes Maritimes, France. Cuttings presented by Dr. Mario Calvino, San Remo, Italy. Received March 2, 1928. Numbered in September, 1929.

A wild variety resistant to frost.

81529 to 81568.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received September 3, 1929.

81529 to 81532. ASTRAGALUS SINICUS L. Fabaceae.

Genge clover obtained from the Gifu Agricultural Experiment Station, Gifu, August 12, 1929.

81529. No. 1104. Station No. 4. An early variety used for green-manure purposes.

81530. No. 1105. Station No. 5. A middle or medium-seasoned variety.

81531. No. 1106. Station No. 6. A late variety used for green manure.

81532. No. 1107. *Sogaya.* Station No. 7. A very late variety used as a green manure.

81533. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 1103. Tokyo, August 11, 1929. A light-green watermelon, 8 to 10 inches or more in diameter, with small seeds, a thin rind, and attractive red flesh which is sweet and juicy.

81534 to 81536. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

Tokyo, August 3, 1929.

81534. No. 975. A green-fleshed melon about 4 inches in diameter and 8 to 10 inches long, which is whitish green with darker lines of green from the stem to the blossom.

81535. No. 976. A melon 3 to 4 inches in diameter and 7 to 9 inches long, with greenish flesh, and the outside green overlaid with yellow.

81536. No. 977. A small bright-yellow Japanese or Chinese melon with snow-white flesh.

81537. FESTUCA sp. Poaceae. **Grass.**

No. 493. Obtained from a small bunch of grass growing near undergrowth along the road near Yamanaka Lake, July 23, 1929.

81538. HELWINGIA JAPONICA (Thunb.) Dietr. Cornaceae.

No. 662. Obtained from a plant along the trail to Mount Fuji, near Subashiri, July 24, 1929. A bushy deciduous shrub 3 to 5 feet high, with slender green branchlets, ovate serrulate leaves 2 to 3 inches long, and small umbels of greenish white flowers followed by black subglobose fruits one-fourth of an inch in diameter. It is interesting because the flowers and fruits are borne on the upper surface of the leaves. Native to Japan and China.

81539. IMPATIENS sp. Impatientaceae.

No. 661. Growing in lava soil in the woods near Lake Yamanaka, at an altitude of 3,200 feet, July 23, 1929. Flowers orange yellow.

81540 to 81542. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

81540. LONICERA sp.

No. 840. From a bush growing along the roadside near Karuizawa, August 5, 1929. Fruits bright red.

81541. LONICERA sp.

No. 884. From a tree in a yard near the railway station at Kurihira, August 7, 1929. Tree about 15 feet high and 11 or 12 inches in circumference.

81542. LONICERA sp.

No. 979. Botanic Garden, Tokyo. July 31, 1929.

81543. LOTUS sp. Fabaceae.

No. 642. From plants growing at an altitude of 2,600 feet along the mountain trail near Subashiri, Mount Fuji region, July 24, 1929.

81544. LOTUS sp. Fabaceae.

No. 997. From plants along the mountain trail near Usuitoge, at an altitude of 4,200 feet, August 8, 1929.

81545. LUPINUS LUTEUS L. Fabaceae. **European yellow lupine.**

No. 1108. Obtained from the Gifu Agricultural Experiment Station, Gifu, August 12, 1929. A variety with gray-mottled seeds which have bluish black markings. It is said to be used for green manure.

81546. ORNITHOPUS SATIVUS Brot. Fabaceae. **Serradella.**

No. 1110. Obtained from the Gifu Agricultural Experiment Station, August 12, 1929. Used as a green manure.

81529 to 81568—Continued.

81547 and 81548. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

81547. No. 853. Obtained from plants growing near the station of Kitakaruizawa, at an altitude of about 4,200 feet, August 7, 1929.

81548. No. 899. From plants on a mountain top known as Sunset View, near Usuitoge, at an altitude of 4,200 feet, August 8, 1929. A grass which makes a short growth, but seeds heavily.

81549. POA sp. Poaceae. **Grass.**

No. 604. A grass, about 3 feet high, growing along the roadside near Lake Yamanaka, July 23, 1929.

81550. PRUNUS BUERGERIANA Miquel. Amygdalaceae. **Cherry.**

No. 966. Botanic Garden, Tokyo, July 31, 1929. A hardy, much-branched deciduous tree becoming 30 feet or more high, with elliptic or oblong, acuminate leaves about 4 inches long, light green beneath. The small white flowers, one-third of an inch across, in slender racemes 3 inches long, are succeeded by small, round, black fruits. Native to northern Japan and Chosen.

81551 to 81557. RUBUS spp. Rosaceae.

81551. RUBUS sp.

No. 694. Obtained from a dwarf species growing near Lake Yamanaka, July 24, 1929. Flowers large and white.

81552. RUBUS sp.

No. 860. Obtained from plants growing along a roadside between Kitakaruizawa and Kose, at altitudes between 3,800 and 4,200 feet, August 7, 1929. The vines are tall and thorny, the leaves deeply lobed, and the fruits bright red and of excellent quality.

81553. RUBUS sp.

No. 872. From vines growing along the roadside between Kitakaruizawa and Kose, at an altitude of 3,800 feet, August 7, 1929. A species with trifoliolate leaves, which are white underneath, and small steel-blue fruits.

81554. RUBUS sp.

No. 885. From tall thorny plants near Kose, August 7, 1929. Fruits bright red.

81555. RUBUS sp.

No. 887. Plants growing along a road near Kose, at an altitude of 3,800 feet, August 7, 1929. Fruits bright red.

81556. RUBUS sp.

No. 892. Growing along a road near Kose, August 7, 1929. Vines of dwarf runner type with bright-red fruits of good quality.

81557. RUBUS sp.

No. 896. From plants along the road between Kitakaruizawa and Kose, August 7, 1929.

81558 to 81560. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

81558. No. 666. From plants along the road between Gotemba and Fujima, July 25, 1929. A clover which makes an excellent growth.

81559. No. 847. From plants along the roadside near Karuizawa, at an altitude of 2,800 feet, August 7, 1929.

81560. No. 994. From plants on a mountain top known as Sunset View, at Usuitoge, at an altitude of 4,200 feet, August 8, 1929.

81561 and 81562. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

81561. No. 660. Growing in lava soil along the Mount Fuji trail, Subashiri, at an altitude of 2,600 feet, July 24, 1929.

81562. No. 996. From plants on a mountain top known as Sunset View, near Usuitoge, August 8, 1929.

81563. VACCINIUM sp. Vacciniaceae.

No. 846. From a mountain near Karuizawa, August 7, 1929. A species producing almost round, tart fruits of very good quality, which are very large and fine for a wild species.

81564. VIBURNUM sp. Caprifoliaceae.

No. 679. From plants along the trail between Gotemba and Fujima, July 26, 1929. Fruits bright red, turning to a very deep purple, almost black when mature.

81565. VIBURNUM sp. Caprifoliaceae.

No. 1101. Hibiya Park, Toyko, August 11, 1929. A tree 20 feet or more high and about 8 inches in diameter, with broad dark-green leaves and oblong berries, which are black when fully ripe.

81566. VICIA SATIVA L. Fabaceae. **Common vetch.**

No. 1109. Obtained from the Gifu Agricultural Experiment Station, Gifu, August 12, 1929. Used as a green manure.

81567. VICIA TETRASPERMA (L.) Moench. Fabaceae. **Vetch.**

No. 667. From plants along a hillside on the road between Gotemba and Fujima, July 25, 1929. A very early-maturing variety.

81568. ZANTHOXYLUM SCHINIFOLIUM Sieb. and Zucc. Rutaceae.

No. 974. Botanic Garden, Tokyo, August 31, 1929. A graceful Japanese shrub or small tree with attractive compound leaves and rather conspicuous clusters of greenish or brownish fruits in autumn.

For previous introduction see No. 77870.

81569. ANNONA PURPUREA Moc. and Sesse. Annonaceae. **Soncoya.**

From Mazatenango, Guatemala. Seeds presented by Wilson Popenoe, United Fruit Co., Tela, Honduras. Received September 19, 1929.

A variety producing very attractive fruits 5 or 6 inches in diameter, but with fibrous flesh of little character. The gorgeous orange-yellow color of the flesh, however, may make this variety of value for breeding purposes.

For previous introduction see No. 54528.

81570 and 81571.

From Mount Silinda, Melsetter District, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received September 19, 1929.

81570. BAUHINIA sp. Caesalpiniaceae.

Chianzga. A remarkably durable timber tree especially valued for fence posts; the wood is said to last for 50 years. The tree grows over a wide range of country and conditions at altitudes between 1,000 and 4,000 feet.

81571. CITRUS sp. Rutaceae.

A wild orange.

81572. NYMPHAEA LOTUS L. Nymphaeaceae. **White Egyptian lotus.**

From Dar es Salaam, Tanganyika Territory, Africa. Seeds presented by T. H. Marshall, Department of Agriculture. Received August 19, 1929.

A water lily indigenous to Tanganyika Territory. The outer petals of the flowers are white and the inner stamens yellow.

81573 to 81576. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Grenada, British West Indies. Suckers presented by W. O. O'Brien Donovan, Agricultural Officer in Charge, Grenada Department of Agriculture. Received September 18, 1929.

81573. *Chincona.* **81575.** *Red Spanish.*

81574. *Green.* **81576.** *Santa Clara.*

81577. CARYOCAR TUBERCULOSUM (Aubl.) Baill. (*C. tomentosum* Willd.). Caryocaraceae.

From Paramaribo, Dutch Guiana. Seeds presented by S. Sahal, Director, Agricultural Experiment Station. Received September 16, 1929.

A tree, native to tropical America, up to 100 feet high, with digitately three to five foliolate leathery leaves and large white flowers in terminal racemes, followed by large drupaceous fruits having a hard stone and an edible seed. One of the souari nuts.

81578. ASTRAGALUS ARENARIUS L. Fabaceae.

From Stockholm, Sweden. Seeds presented by Dr. Robert E. Fries, Director of the Botanic Garden. Received September 30, 1929.

A herbaceous gray-hairy perennial with a branched, often widespreading rhizome, and a slender prostrate or ascending stem a foot or less high. The leaves are imparipinnate. The small bright purple flowers are in long-stemmed loose clusters. Native to sandy places in eastern Europe.

81579 and 81580.

From Burma. Seeds collected by Capt. F. Kingdon Ward and presented through S. C. Simms, Director, Field Museum of Natural History, Chicago, Ill. Received September 18, 1929.

81579. MUCUNA sp. Fabaceae.

Obtained in the jungle, near Vientrave Laes, in the region of the Mekong River, at an altitude of 1,000 feet, July, 1929.

81579 to 81580—Continued.

81580. ZEA MAYS L. Poaceae. **Corn.**

Maize of Anam.

81581 to 81594.

From Port of Spain, Trinidad, British West Indies. Seeds presented by R. O. Williams, Superintendent and Assistant Botanist, Department of Agriculture. Received September 24, 1929.

81581. ACROCOMIA SCLEROCARPA Mart. Phoenicaceae. **Macauba palm.**

For previous introduction and description see No. 81274.

81582. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude. Phoenicaceae. **Palm.**

A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long, of lanceolate usually entire leaflets 1 to 2 feet long and whitish beneath. The greenish yellow flowers are borne in a cluster about a foot in length and are followed by small round fruits. Native to Queensland, Australia.

For previous introduction see No. 80171.

81583. ARECA CATECHU L. Phoenicaceae. **Betel palm.**

The betel palm is considered one of the most graceful, bearing at the top of its trunk, 40 to 100 feet high, a large crown of pinnately divided leaves 4 to 6 feet long, the lowest usually pendulous. The ovoid smooth fruits, 1 to 2 inches in diameter, are orange-yellow or scarlet, and furnish the well-known betel nut. It is native to southeastern Asia.

For previous introduction see No. 80172.

81584. CARYOTA MITIS Lour. Phoenicaceae. **Palm.**

A palm, native to the Malay Peninsula, about 20 feet high, with a straight cylindrical spineless ringed trunk 4 inches or more in diameter and bipinnate leaves 4 to 9 feet in length. The purple fruits are about the size of cherries.

For previous introduction see No. 80179.

81585. CHRYSALIDOCARPUS LUTESCENS (Bory) Wendl. Phoenicaceae. **Yellow palm.**

A spineless, stoloniferous palm up to 30 feet high, native to Madagascar. The pinnate leaves are about 5 feet long, and the fruits are violet or almost black.

For previous introduction see No. 78417.

81586. COCCOTHRINAX ARGENTEA (Roem. and Schult.) Sarg. Phoenicaceae. **Silver palm.**

A dwarf palm with fan-shaped leaves which are silvery gray underneath. Native to the West Indies.

81587. GUILIELMA SPECIOSA Mart. Phoenicaceae. **Pupunha.**

The *peach palm* of the Amazon River, which ascends to the warm temperate regions of the Andes. The clustered stems attain a height of 40 feet. The fruit grows in large bunches, has a firm, thick,

81581 to 81594—Continued.

and mealy pericarp, and when cooked has a flavor between that of the potato and the chestnut, but superior to either.

For previous introduction see No. 60367.

81588. HYOPHORBE VERSCHAFFELTI Wendl. Phoenicaceae. **Spindle palm.**

An unarmed palm, native to the island of Mauritius, with a spindle-shaped trunk 25 to 30 feet high, pinnate leaves having a yellow band along the midrib, and orange-colored flowers.

For previous introduction see No. 80182.

81589. LICUALA GRANDIS (Bull) Wendl. Phoenicaceae. **Palm.**

A dwarf palm with the stem clothed with the dead leaf sheaths, erect-spreading fan-shaped leaves having closely plicate segments which are two lobed at the end. Native to the island of New Pommern, Bismarck Archipelago.

81590. LICUALA SPINOSA Thunb. Phoenicaceae. **Palm.**

A dwarf fan-leaved palm, native to the West Indies, 10 to 12 feet high, with roundish leaves 3 feet or more in diameter and 3-angled petioles armed with brownish, hooked spines. It requires abundant heat and moisture.

For previous introduction see No. 66226.

81591. LIVISTONA ALTISSIMA Zoll. Phoenicaceae. **Palm.**

A graceful palm, up to 80 feet high, with fan-shaped leaves. The hardwood is valued by the natives for construction work. It is native to the East Indies.

For previous introduction see No. 72598.

81592. MARTINEZIA CORALLINA Mart. Phoenicaceae. **Palm.**

A spiny palm with pinnate leaves about 9 feet long and clusters, 2 to 3 feet long, of small white flowers followed by bright-red fruits nearly an inch in diameter. The pale-brown seeds are used for necklaces. Native to the island of Martinique.

For previous introduction see No. 80188.

81593. PTYCHORAPHIS AUGUSTA (Kurz) Beccari. Phoenicaceae. **Palm.**

A pinnate-leaved palm growing to a height of 100 feet, with a smooth slender trunk and bright-green leaves 6 to 10 feet long, made up of linear segments 1 to 2 feet long. The red, elliptical-oblong fruits are borne in clusters 2 to 3 feet long. Native to the Nicobar Islands.

81594. RHYTICOCOS AMARA (Jacq.) Beccari (*Cocos amara* Jacq.) Phoenicaceae. **Palm.**

A tall, feather-leaved palm, 50 to 100 feet high, with a ringed trunk and bearing a crown of large pinnate leaves resembling those of the coconut. It is native to the island of Martinique.

For previous introduction see No. 80191.

81595. PANDANUS FURCATUS Roxb. Pandanaceae. **Screwpine.**

From Darjiling, India. Seeds presented by C. C. Calder, Lloyd Botanic Garden. Received September 26, 1929.

One of the most ornamental of the screwpines, which attains a height of about 15 feet, with dark-green spiny leaves 9 or more feet long, gracefully arching and somewhat spirally arranged. The flowers are sweetly scented. Native to the East Indies.

For previous introduction see No. 73249.

81596. SICANA sp. Cucurbitaceae.

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, Director de la Estación Nacional Agronómica y Colegio de Agricultura. Received September 20, 1929.

A woody vine producing edible cylindrical fruits which are remarkable for their strong and persistent applelike flavor.

81597. SCHINOPSIS LORENTZII (Griseb.) Engl. Anacardiaceae. **Quebracho.**

From Tucuman, Argentina. Seeds presented by Dr. William E. Gross, Director, Estación Experimental Agrícola. Received September 26, 1929.

A deciduous timber tree, with leathery, compound sumachlike leaves and branched clusters of small flowers. The deep-red wood is very hard and durable and yields quebracho, an important tannin of commerce. Native to the drier western plains of Argentina.

For previous introduction see No. 68980.

81598 to 81601.

From Oran, Algeria, Africa. Seeds presented by Prof. A. Faure. Received September 23, 1929.

81598. CELSIA BATTANDIERI Murbeck. Scrophulariaceae.

Collected on rocky slopes at Santa Cruz, at an altitude of about 1,200 feet, January 9, 1929. A mulleinlike biennial or annual, 1 or 2 feet high, native to western Algeria. The stem is stiffly erect, and the oblong-lanceolate or ovate dentate lobed leaves are petiolate on the lower part of the stem but sessile above. The attractive orange-yellow flowers, 1 to 2 inches across, are in an elongated raceme.

81599. CELSIA FAUREI Murbeck. Scrophulariaceae.

Collected on railway embankments at Oued Imbert, at an altitude of about 1,500 feet, April 8, 1929. An erect biennial up to 6 feet high, native to Algeria. The ovate-lanceolate leaves are coarsely dentate or lobed, sessile above and petiolate below. The showy yellow flowers, about 2 inches across, are in a many-flowered lax raceme.

81600. HEDYSARUM PALLIDUM Desf. Fabaceae.

Collected in gravelly meadows in Santa Cruz, at an altitude of about 900 feet, May 26, 1929. A decumbent perennial legume, native to northern Africa, with compound pubescent leaves, clusters of purple-streaked white flowers, and spiny articulated pods. It has been recommended for green manure in olive orchards.

For previous introduction see No. 77453.

81598 to 81601—Continued.

81601. PSORALEA BITUMINOSA L. Fabaceae. **Scurf-pea.**

Collected on the edges of fields in Oued Imbert, at an altitude of about 1,500 feet, April 8, 1929. A herbaceous perennial, native to the Mediterranean region, with trifoliolate leaves and small bluish flowers in loose heads. Of value for green manure.

For previous introduction see No. 77627.

81602 to 81604. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Merredin, Western Australia. Seeds presented by the Merredin Experiment Farm, through J. A. Clark, Bureau of Plant Industry. Received September 27, 1929.

81602. P. 1437. *Carrabin.*

81603. P. 1440. *Merredin.*

81604. P. 1769. *Noongaar.*

81605 to 81613. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Palestine. Seeds presented by A. Grasovsky, Subinspector of Agriculture and Forests, Southern Circle, Jerusalem. Received September 26, 1929.

81605. No. 15. *Franji.* From Artas.

81606. No. 3. *Mawi.* From Jaffa.

81607. No. 1. *Klabi Abayd.* From Acre.

81608. No. 4. *Late Klabi.* From Motza.

81609. No. 6. *Lozi.* From Jerusalem.

81610. No. 8. *Marawi.* From Nazareth.

81611. No. 2. *Wardi.* From Artas.

81612. No. 7–A. *Mustekawi.* From Artas.

81613. No. 7–B. *Mustekawi.* From Artas.

81614. DRACONTOMELON EDULE (Blanco) Skeels. Anacardiaceae.

From Sorsogon, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received July 31, 1929.

Alauihau. A fruit resembling a greenish brown-yellow flat plum with scant but pleasantly subacid pulp, recalling the flavor of *Spondias cytherea.* It is common in the market at Sorsogon and is gathered from wild trees in the forest, in a region with abundant rainfall equally distributed throughout the year. The tree is 50 feet

81614—Continued.

or less high, with a rounded crown. The handsome dark-green pinnate leaves consist of 8 to 12 pairs of hairy pointed leaflets.

For previous introduction see No. 32293.

81615. JUGLANS JAMAICENSIS C. DC. Juglandaceae. **Walnut.**

From Moca, Dominican Republic. Seeds presented by Dr. R. Ciferri, Director de la Estación Nacional Agronómica y Colegio de Agricultura. Received September 7, 1929.

A walnut, native to Jamaica, with alternate compound leaves made up of nine pairs of lanceolate, serrate, shining green leaflets, paler beneath. The thick-shelled nuts are globose and attenuate.

81616 and 81617. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). Rutaceae. **Grapefruit.**

From Pasar Minggoe, Java. Budded plants presented by the Tuinbouwkundig Ambtenaar. Received September 5, 1929.

81616. No. 1. *Djeroek pandanwangi.* The fruits have dark-red, very sweet flesh.

81617. No. 2. *Djeroek delima.* The fruits have red flesh which is very juicy but a little sour.

81618. VACCINIUM CANADENSE Kalm. Vacciniaceae. **Canada blueberry.**

From Hudson Bay Junction, Saskatchewan, Canada. Seeds collected by Knowles A. Ryerson, Bureau of Plant Industry. Received September 30, 1929.

No. 147. A variety growing on a sandy pine ridge 30 to 40 feet above the river and at least a mile away from it. The plants had had no rain for quite a while and yet they were producing very good-sized fruits; in fact, better than any found at any place farther north.

81619. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

From the Loyalty Islands. Seeds presented by Prof. I. Franc, Noumea, New Caledonia, through Alfred Rehder, Curator of the Herbarium of the Arnold Arboretum, Jamaica Plain, Mass., and W. T. Swingle, Bureau of Plant Industry. Received September 11, 1929.

The inhabitants of the Loyalty Islands have raised trees since time immemorial and have no knowledge of grafting. Chance seedlings always produce, with some care, succulent fruits 3 to 4 inches in diameter. The variety is believed to be absolutely fixed, and comes true from seed.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 101

Washington, D. C. Issued June, 1931

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1929 (Nos. 81620–82599)

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INTRODUCTORY STATEMENT

The plant material included in this inventory (Nos. 81620 to 82599) for the period from October 1, 1929, to December 31, 1929, represents very largely the collections made in the Orient by W. J. Morse and P. H. Dorsett. Since forage crops in general and soybeans in particular were the aims of this expedition, it is not surprising that over 250 samples are represented. They include types and strains ranging from those bought from farmers' fields to specialized samples representing local selection work. It is interesting to observe also among the notes given for Nos. 81762 to 81786 the extent of variations already observed and isolated at the several experiment stations and to note that their collections include strains originally obtained outside of Japan. Red clovers also are well represented with samples collected in the wild in many parts of Japan, three samples coming from the Koton Experiment Station at Hokushu from seed originally obtained from Finland and one from Sweden; also four collections were obtained from Chosen.

A few alfalfas are included, some collections being from native sources, while others are purchases, but all resulting from the work of H. L. Westover, of the Division of Forage Crops and Diseases.

Adsuki beans are also included in several numbers as a result of the collecting work of Messrs. Dorsett and Morse. These show almost as much variation in character and in origin as do the soybeans. Most of these were obtained in Chosen, together with samples of mung beans and rice beans from the native markets.

Lespedezas are included also in the general collections from Dorsett and Morse, all being received as unidentified species.

In addition to the material sent in by the explorers already mentioned, this inventory includes material sent in by Messers. Ryerson, Alderman, and Leslie from Canada, by R. K. Beattie from Japan, and by W. E. Whitehouse from Persia, as well as material received in exchange from foreign collaborators and that procured by purchase.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., February 18, 1931.

49237—31——1

INVENTORY[1]

81620. PTEROCARPUS SERICEUS Benth. Fabaceae.

From Salisbury, Southern Rhodesia, Africa. Seeds presented by the Forest Officer, Department of Agriculture, Salisbury, at the request of C. E. Legat, Chief Conservator of Forests, Pretoria. Received October 22, 1929.

An unarmed evergreen tree, native to southern Africa, with alternate, unequally pinnate leaves, shining silky beneath or on both sides, and oval-roundish pods about an inch and a half long.

For previous introduction see No. 50179.

81621 and 81622. VITIS VINIFERA L. Vitaceae. **European grape.**

From Bulgaria. Seeds obtained through George L. Husmann, Bureau of Plant Industry. Received October 23, 1929.

81621. A red variety.

81622. A green variety.

81623. LILIUM sp. Liliaceae. **Lily.**

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 26, 1929.

No. 1378. Obtained from plants growing in the Ainu village of Shiraoi, southern Hokushu, September 29, 1929. An edible species.

81624 to 81633.

From Quetta, India. Seeds purchased from the manager, Quetta Fruit Agency. Received October 24, 1929.

81624 to 81627. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

81624. A black-striped variety.

81625. *Mashedi quality.*

81626. *Pishin.*

81627. *Quetta.*

81624 to 81633—Continued.

81628 and 81629. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

81628. *Mastung.*

81629. *Sarda.*

81630 and 81631. PISTACIA VERA L. Anacardiaceae. **Pistache.**

81630. [No data.]

81631. [No data.]

81632 and 81633. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

81632. [No data.]

81633. [No data.]

81634. ACONITUM YEZOENSE Nakai. Ranunculaceae. **Monkshood.**

From Sapporo, Hokushu, Japan. Roots collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 1, 1929.

No. 1193. Botanical Garden, Hokkaido Imperial University, September 24, 1929. A hardy herbaceous perennial native to northern Japan, which becomes about 5 feet high. The leaves are palmately 3-parted to 5-parted, and the large, deep purplish-blue flowers are borne in large clusters.

81635 and 81636. PITHECOLLOBIUM spp. Mimosaceae.

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Botanic Gardens. Received December 16, 1929.

81635. PITHECOLLOBIUM CLYPEARIA (Jack) Benth.

A low tropical ornamental tree with fine-cut foliage and small whitish flowers. Native to the East Indies.

For previous introduction see No. 73254.

81636. PITHECOLLOBIUM HYMENEAEFOLIUM (Humb. and Bonpl.) Benth.

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in, so that definite identification can be made.

81635 and 81636—Continued.

An ornamental leguminous tree with pinnate foliage. Native to tropical America.

For previous introduction see No. 73255.

81637. VITIS VINIFERA L. Vitaceae. **European grape.**

From Weihsien, Shantung, China. Cuttings presented by J. Ashley Fitch, American Presbyterian Mission. Received December 17, 1929.

A white or green grape a little smaller than the usual cultivated variety and rarely containing seeds. It is very good for cooking and canning, and it should make a good table variety for those who like an acid grape. It ripens about the first part of August in Weihsien. The canned fruit has a noticeable deposit of cream-of-tartar crystals when taken out of the cans. This variety is known as *Dzang* or *Dzang pu tao* in Chinese.

81638. CHRYSOPHYLLUM FULVUM S. Moore. Sapotaceae.

From Mount Silinda, Melsetter District, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received September 21, 1929.

A large tropical tree up to 100 feet high, with leathery, oblong-lanceolate leaves 3 to 6 inches long, small white axillary flowers, and brownish fruits which contain a milky latex. Native to Gazaland, Africa.

81639 to 81660.

From Hokushu, Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 21, 1929.

81639. ACANTHOPANAX sp. Araliaceae.

No. 1094. Obtained in a thicket along the road near Nokkenshi, September 23, 1929.

81640. ACER sp. Aceraceae. **Maple.**

No. 1071. Obtained along a river bank near Obihiro, September 21, 1929.

81641. ACONITUM YEZOENSE Nakai. Ranunculaceae. **Monkshood.**

No. 1367. From plants growing along the roadside near Nikoro, September 24, 1929.

For previous introduction and description see No. 81634.

81642. EUONYMUS ALATUS (Thunb.) Rupr. Celastraceae. **Winged euonymus.**

No. 1049. Obtained from a shrub in the school grounds at Obihiro, September 18, 1929. A spreading shrub, 4 or 5 feet high, with sharply toothed elliptic leaves about 2 inches long, small clusters of yellowish flowers, and small 2-seeded fruits.

For previous introduction see No. 65926.

81643. FALCATA JAPONICA Oliver. Fabaceae.

No. 1055. A leguminous vine growing along the sides of a bank near the river in the vicinity of Obihiro, September 20, 1929.

For previous introduction see No. 65278.

81639 to 81660—Continued.

81644. LESPEDEZA sp. Fabaceae. **Bushclover.**

No. 1079. Obtained from plants along a road near the table-land of Tokachi, Taisho Mura, September 22, 1929. The plants are 4 to 6 feet high and very abundant.

81645. MEIBOMIA JAPONICA (Miquel) Kuntze. Fabaceae.

No. 1372. Obtained along a path in the woods near Nokkenshi, September 23, 1929.

81646. MENTHA ARVENSIS PIPERASCENS Malinv. Menthaceae. **Japanese mint.**

No. 1370. Obtained from the Kitami Branch Experiment Station, Nokkenshi, September 24, 1929. *Kitami akamaru.* This variety is grown most generally in the district of Kitami where peppermint is extensively grown. A cultivated variety with large leaves and yielding more oil than the ordinary mint.

For previous introduction see No. 75137.

81647 and 81648. PAEONIA spp. Ranunculaceae. **Peony.**

No. 1081. From wild plants at the edge of the woods near the table-land of Tokachi, Experiment Station, Taisho Mura, September 22, 1929.

81647. PAEONIA sp.

Seeds.

81648. PAEONIA sp.

Roots.

81649. PHELLODENDRON sp. Rutaceae. **Corktree.**

No. 1090. Obtained along the road near Nokkenshi, September 23, 1929.

81650. RHAMNUS JAPONICA Maxim, Rhamnaceae. **Buckthorn.**

No. 1069. Obtained along the river bank near Obihiro, September 21, 1929. A shrub, native to Japan, up to 9 feet high, with glossy pale-green leaves 1 to 2 inches long, an abundance of greenish-brown flowers in dense clusters at the ends of the short branches, and small blackish-purple berries.

For previous introduction see No. 75689.

81651. RUBUS sp. Rosaceae.

No. 1333. Obtained in the foothills near Odomari, Sakhalin Island, September 12, 1929. A species with very spiny stems and trifoliolate leaves which are silvery beneath. This resembles the true raspberry.

81652 and 81653. SCHIZANDRA CHINENSIS (Turcz.) Baill. Magnoliaceae.

A woody vine, native to northeastern China, with shining dark-green oval leaves and clusters of coral-colored berries.

For previous introduction see No. 76188.

81652. No. 1066. From vines along the river bank near Obihiro, September 21, 1929.

81653. No. 1093. From a vine in a small park in the suburbs of Nokkenshi, September 23, 1929.

81654. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

81639 to 81660—Continued.

No. 1072. From a farmer's field near Obihiro, September 21, 1929. A very early, prolific variety with greenish-yellow seeds and tawny hairs.

81655 and 81656. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

81655. No. 1052. Obtained along the roadside where red clover was growing very abundantly, near Obihiro, September 19, 1929.

81656. No. 1077. From plants in waste places near the table-land of Tokachi, Experiment Station, near Taisho Mura, September 22, 1929.

81657. VACCINIUM sp. Vacciniaceae.

No. 1341. Obtained in Odomari, Sakhalin Island, September 12, 1929. A species about 8 inches high, bearing large clusters of small, bright-red berries with white pulp; they resemble cranberries in flavor. The berries are candied, made into jam, sweet paste, or brandy, and are also made into a sauce much like cranberry sauce.

81658. VICIA CRACCA L. Fabaceae. **Cow vetch.**

No. 1056. From plants growing along the river bank near Obihiro, September 20, 1929.

81659. VICIA sp. Fabaceae. **Vetch.**

No. 1303. Obtained along a roadside near Koetoi, September 10, 1929.

81660. VITIS sp. Vitaceae. **Grape.**

No. 1357. Obtained in Asahigama, September 14, 1929. A wild species with good-sized bunches of large, deep-purple fruits containing rather large seeds.

81661. RHODODENDRON sp. Ericaceae. **Azalea.**

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received October 28, 1929.

No. 852. A red-flowered species collected in the wild at Saka Ue Mura, Kuga Gun, Yamaguchi Ken, by S. Hayashi, September 25, 1929.

81662. RUBUS sp. Rosaceae. **Jamberry.**

From Dublin, Ireland. Plants presented by W. S. Gosset, Dublin, through H. D. Locklin, Western Washington Experiment Station, Puyallup, Wash. Received October 30, 1929.

The originator, W. S. Gosset, crossed the Logan with the Yellow Antwerp raspberry and selected this from among the seedlings. The variety has the Logan habit of growth and propagates from the tips, and the whole growth is only about one-third to one-half that of the Logan. The fruit is also smaller, and is said to be sweeter and especially fine when not cooked. After cooking it is very much like the Logan.

81663 and 81664. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Manila, Philippine Islands. Plants presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received October 30, 1929.

81663. *Señora* on *Pahutan.*

81664. *Señora* on *Pico.*

81665 to 81669.

From Japan and China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in October, 1929.

81665. LILIUM CORDIFOLIUM Thunb. Liliaceae. **Lily.**

No. 1420. From the Botanic Garden, Hokushu Imperial University, Sapporo, Japan, October 2, 1929. A lily, native to Japan, 3 to 4 feet high, with pendulous leaves 12 to 18 inches long and wide and a raceme of 4 to 10 fragrant white flowers often 6 inches long. These seeds were received as *Lilium glehni*, which is said to differ very slightly from typical *L. cordifolium*.

For previous introduction see No. 75677.

81666. LILIUM DAURICUM Ker. Liliaceae. **Candlestick lily.**

No. 1413. From the Botanic Garden, Hokushu Imperial University, Sapporo, Japan, October 2, 1929. A plant about 3 feet high, with a smooth or slightly furrowed stem which is green or tinged with brown or purple. The 20 to 50 horizontal leaves are 3 to 5 inches long, and the flowers, one to five in a cluster and 3 to 5 inches across, are orange red, slightly spotted with purplish black and tinged with yellow in the center; the anthers are red.

For previous introduction see No. 78605.

81667. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

No. 1374. Obtained from Lukashik & Sons, Wuchang Road, Tientsin, China, September 27, 1929. An early yellow variety known as *Selection I. V. V. Croushoul*, said to ripen in the vicinity of Harbin within 90 to 100 days.

81668. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

No. 1377. Obtained along a roadside near the seacoast in the vicinity of the Ainu village of Shiraoi, southern Hokushu, Japan, September 29, 1929.

81669. (Undetermined.)

No. 1375. From plants along the roadside near Koetoi, Hokushu, Japan, September 10, 1929.

81670. UVARIA sp. Annonaceae.

From Isabela, Luzon, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received October 26, 1929.

A small ornamental tree with a dark-green, dense crown, and red, edible fruits about an inch long.

81671. ANIGOZANTHOS MANGLESII D. Don. Amaryllidaceae.

From Perth, Western Australia. Seeds presented by Miss Helen Ogden. Received October 29, 1929.

An amaryllidaceous plant native to the Swan River country of southwestern Australia. It bears scorpoid racemes, nearly a foot long, on stout, woolly, bright-red stems. The lustrous green, tomentose flowers, 3 inches long, are tubular in bud, but split nearly to the base on opening, with the tips recurved, and bear the yellow stamens on the curve.

For previous introduction see No. 51344.

81672. TERMINALIA BROWNII Fresen. Combretaceae.

From Giza, Egypt. Seeds presented by Thomas W. Brown, Director, Horticultural Section, Ministry of Agriculture. Received October 25, 1929.

A small tropical tree with ash-colored bark and broadly lanceolate leaves, 3 to 6 inches long, in large tufts at the tips of the branches. The inconspicuous greenish flowers are in long lax spikes and are followed by flat-winged purplish-red fruits 2 to 3 inches long. Native to Ethiopia.

81673 and 81674.

From Bogota, Colombia. Roots presented by Hernando Villa. Received October 30, 1929.

81673. OXALIS TUBEROSA Molina. Oxalidaceae.

Ibia. A plant, native to South America, related to the woodsorrel of the United States. It is grown in the Andes for its edible tubers.

For previous introduction see No. 74701.

81674. TROPAEOLUM TUBEROSUM Ruiz and Pav. Tropaeolaceae. **Nasturtium.**

Cubia. A tuberous-rooted herbaceous climber, with red and yellow flowers, native to the highlands of northern South America, where the tubers are boiled and eaten as a vegetable. The plant is said to be able to withstand a slight frost.

For previous introduction see No. 69896.

81675. CASTANOPSIS ARGYROPHYLLA King. Fagaceae. **Evergreen chinquapin.**

From Dehra Dun, United Provinces, India. Seeds presented by R. N. Parker, Forest Botanist, Forest Research Institute and College. Received November 1, 1929.

A tropical evergreen tree, 50 to 60 feet high, with thinly coriaceous lanceolate leaves, 4 to 6 inches long, green above and silvery beneath. The one to three rusty tomentose nuts are in a thin-walled shell which has awl-shaped hooked spines. Native to India.

81676 to 81678. FICUS CARICA L. Moraceae. **Common fig.**

From West Worthing, England. Cuttings obtained from the Tarring Fig Garden, through Dr. S. H. Cameron, University of California, Berkeley. Received October 24, 1929.

81676. *Brown Turkey.*

81677. *Honey.*

81678. *Madagascar.*

81679. ALLIUM CEPA L. Liliaceae. **Onion.**

From Valencia, Spain. Seeds purchased through Clement S. Edwards, American consul. Received October 31, 1929.

Grano.

81680. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). Rutaceae. **Grapefruit.**

81680—Continued.

From Honolulu, Hawaii. Scions presented by W. T. Pope, Hawaii Agricultural Experiment Station, through W. T. Swingle, Bureau of Plant Industry. Received November 1, 1929.

Victoria shaddock.

81681 to 81685. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Pasar Minggoe, Java. Plants presented by the Tuinbouwkundig Ambtenaar. Received August 20, 1929. Numbered in October, 1929.

81681. No. 1. *Baroengboen,* grafted on *Madoe.* An everbearing mango but of poor quality.

81682. No. 2. *Kopjor.* A very fibrous bright yellow seedling mango which is used as a stock in eastern Java where they have severe droughts and the soil is alkaline and not suited to the growth of ordinary mangos.

81683. No. 4. *Golek,* grafted on *Madoe.* A large, thin, very long, golden yellow, very sweet and juicy mango with few fibers. It is a good bearer on clay soils with stiff subsoil, but not quite as good a bearer as the *Saigon.*

81684 and 81685. *Aroemanis.* In Java this is a medium-sized mango of bluish-green color. The fruit hangs on peduncles, is of fine flavor, has no fiber, is not injured by the winds, and is an excellent shipper. It is considered the best mango in Java.

81684. *Aroemanis* grafted on *Madoe.*

81685. *Aroemanis* grafted on *Mangifera odorata.*

81686. DIOSPYROS sp. Diospyraceae. **Persimmon.**

From Denison, Tex. Plants purchased from the Munson Nurseries. Received November 12, 1929.

Kawakami. A hybrid of the Josephine (*Diospyros virginiana*) with the Yemon Japanese (*D. kaki*). The shape of the fruit is like that of the native species, but is much larger. It has much of the native quality and is an excellent persimmon.

81687 to 81689.

From Honolulu, Hawaii. Seeds presented by H. L. Lyon, in Charge of the Department of Botany and Forestry, Experiment Station, Hawaiian Sugar Planters' Association. Received November 5, 1929.

81687. ARECASTRUM ROMANZOFFIANUM (Cham.) Becc. (*Cocos romanzoffiana* Cham.). Phoenicaceae. **Palm.**

A palm, native to Brazil, with an unarmed trunk about 30 feet high and a foot in diameter, bearing a crown of plumelike pinnate leaves 12 to 15 feet long. The fruit is a pale orange drupe about the size of a large acorn, inclosing a bony seed which has three eyes near the base.

For previous introduction see No. 44534.

81688. FLACOURTIA JANGOMAS (Lour.) Gmel. (*F. cataphracta* Roxb.). Flacourtiaceae. **Paniala.**

A small spiny tropical tree of compact habit, native to India. It bears small purplish subacid fruits about an inch in diameter, which may be made into an excellent jelly.

81687 to 81689—Continued.

For previous introduction see No. 48284.

81689. PINANGA KUHLII Blume. Phoenicaceae. **Palm.**

A stout, rapid-growing palm, native to the lower altitudes of western Java, becoming 16 to 25 feet high, with annulate stems 2 inches in diameter, reddish when young, and beautiful terminal fronds with pinnate blades 4 feet long and half as wide. This is one of the hardiest species of Pinanga known.

For previous introduction see No. 51735.

81690 and 81691. MYRCIARIA FLORIBUNDA (West) Berg (*Eugenia floribunda* West). Myrtaceae. **Guava berry.**

From St. Croix, Virgin Islands of the United States. Seeds presented by J. B. Thompson, Director, Agricultural Experiment Station. Received November 5, 1929.

A small slender tropical tree with ovate-lanceolate leaves 2 to 3 inches long, and axillary clusters of small white flowers followed by globose edible fruits about a quarter of an inch in diameter. The fruits make a delicious preserve with an aromatic flavor. The tree is native to the West Indies.

For previous introduction see No. 41057.

81690. A variety bearing golden-yellow fruits.

81691. A variety bearing dark-red fruits.

81692 to 81723.

From Canada. Seeds and plants collected by Knowles A. Ryerson, Bureau of Plant Industry, W. A. Alderman, Minnesota Agricultural Experiment Station, and W. R. Leslie, Superintendent of the Experiment Station, Morden, Manitoba. Received September 30, 1929. Numbered in November, 1929.

81692 to 81702. RIBES spp. Grossulariaceae.

81692. RIBES TRISTE Pall. **Swamp red currant.**

No. 19–A. From Mari Lake, Manitoba.

For previous introduction see No. 40487.

81693 to 81699. RIBES OXYACANTHOIDES L.

For previous introduction see No. 40471.

81693. No. 29. From Mari Lake, Manitoba.

81694. No. 59. From an island at the west end of Reed Lake, Manitoba. A variety with large, purple fruits.

81695. No. 68. From an island in Reed Lake, Manitoba. A variety bearing very large fruits about half an inch in diameter.

81696. No. 69. From an island in Reed Lake, Manitoba. A very nearly spineless variety bearing red fruits.

81692 to 81723—Continued.

81697. No. 71. From an island in Reed Lake, Manitoba. A variety with dark red fruits.

81698. No. 72. From an island west of Wyckstand Island, Reed Lake, Manitoba. A variety with purplish-red, very large fruits up to half an inch in diameter.

81699. No. 75. From an island west of Wyckstand Island, Reed Lake, Manitoba. A large-fruited type.

81700 to 81702. RIBES GLANDULOSUM Grauer (*R. prostratum* L'Her.). **Fetid currant.**

81700. No. 41. Plants.

81701. No. 30. From Cold Lake, Manitoba.

81702. No. 70. A large variety.

81703. RUBUS TRIFLORUS Richards. Rosaceae. **Dwarf red blackberry.**

No. 19. From Mari Lake, Manitoba.

81704 to 81710. RUBUS IDAEUS STRIGOSUS (Michx.) Maxim. Rosaceae. **Common red raspberry.**

For previous introduction see No. 68823.

81704. No. 28. From Cold Lake, Manitoba. A fairly large form.

81705. No. 60. From an island at the west end of Reed Lake, Manitoba. A large-fruited form.

81706. No. 61. From an island at the west end of Reed Lake, Manitoba. A large-fruited form.

81707. No. 62. From an island west of Wyckstand Island, Reed Lake, Manitoba.

81708. No. 74. From Wyckstand Island, Reed Lake, Manitoba.

81709. No. 97. From a dry rocky slope, Little Quebec, Herb Lake. A large-fruited form of dwarf plants 12 to 14 inches high.

81710. From Herb Lake, Manitoba. A large-fruited form.

81711. VITIS VULPINA L. Vitaceae. **Riverbank grape.**

No. 178. Southeastern ridge of Riding Mountains, about 20 miles southwest of Dauphin, Manitoba. An early-fruiting form, maturing between two and four weeks earlier than the usual season.

81712. SORBUS AUCUPARIA EDULIS Dieck. Malaceae. **Edible mountain-ash.**

No. 185. From Blodgen's Nursery, Dauphin, Manitoba.

81713. AMELANCHIER ALNIFOLIA Nutt. Malaceae. **Saskatoon.**

No. 24. From a small lake between Barrier Lake and Cold Lake, Manitoba. Bushes 6 to 8 feet high producing an abundance of large berries.

81714. CRATAEGUS COCCINEA L. Malaceae. **Thicket hawthorn.**

No. 152. From Red Deer River, Saskatchewan, about 5 miles west of Hudson Bay Junction.

81715. FRAGARIA VESCA L. Rosaceae. **Alpine strawberry.**

No. 58. From Reed Lake, Manitoba.

81692 to 81723—Continued.

81716. FRAGARIA CANADENSIS Michx. Rosaceae. **Northern wild strawberry.**

No. 110. From Herb Lake, Manitoba.

81717. LEPARGYRAEA CANADENSIS (L.) Greene. Elaeagnaceae. **Russet buffaloberry.**

No. 10. From The Pas, Manitoba.

81718 to 81723. PRUNUS spp. Amygdalaceae.

81718 to 81720. PRUNUS PENNSYLVANICA L. **Pin cherry.**

81718. No. 66. From Bare Rock Falls, Manitoba.

81719. From Herb Lake, Manitoba.

81720. No. 44. From Second Cranberry Lake, Manitoba.

81721. PRUNUS PUMILA L. **Sand cherry.**

No. 146. From Red Deer River, Saskatchewan, about 5 miles from Hudson Bay Junction.

81722 and 81723. PRUNUS VIRGINIANA L. **Common chokecherry.**

From Blodgen's Nursery, Dauphin, Manitoba. Practically nonastringent types.

81722. No. 169. Chokeless No. 1.

81723. No. 170. Chokeless No. 2.

81724. PANDANUS PARVUS Ridley. Pandanaceae. **Screwpine.**

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Botanic Gardens. Received November 12, 1929.

A low slender screwpine, about 3 feet high, with linear-oblong, thin leaves, and very small spines. Native to the East Indies.

For previous introduction see No. 72605.

81725. ARUNDINARIA HINDSII Munro. Poaceae. **Ramrod bamboo.**

From Jacksonville, Fla. Plants and rhizomes presented by Mrs. J. D. Holmes, Jacksonville, through J. H. Wells, Baldwin, Fla. Received November 15, 1929.

An erect bamboo usually reaching 6 to 12 feet, but sometimes having canes about 18 feet high. The dark olive-green stems are about an inch thick, the branches are in dense clusters, and the leaves, mostly erect, are 8 to 10 inches long and less than an inch broad. Native to China and Japan.

81726 to 81760.

From Japan. Seeds, plants, and cuttings collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in October and November, 1929.

81726. ACER DIABOLICUM Blume. Aceraceae. **Devil maple.**

No. 1421. A tree up to 30 feet high with 5-lobed leaves 4 to 8 inches across, the broadly ovate lobes being coarsely and remotely dentate. The racemes of yellow flowers are followed by winged fruits with bristly nutlets. It is native to Japan and closely resembles *A. franchetii* of central China.

For previous introduction see No. 63331.

81726 to 81760—Continued.

81727. ASTRAGALUS SINICUS L. Fabaceae. **Milkvetch.**

No. 1542. From the Gifu Agricultural Experiment Station, October 17, 1929. A red-flowered variety quite common in the farming area about Tokyo, where it is said to be used for forage and green manure. It is a winter crop, being planted early in the fall.

For previous introduction see No. 80533.

81728 to 81730. AVENA SATIVA L. Poaceae. **Oats.**

From the Hokushu Experiment Station, Kotoni, October 7, 1929.

81728. No. 1532. *Shiro kataho* (white one side of spike).

81729. No. 1533. *Victory No. 1.*

81730. No. 1534. *Belgium No. 12.*

81731. CRATAEGUS SANGUINEA Pall. Malaceae. **Hawthorn.**

No. 1154. From the Sapporo Botanic Garden, Sapporo, Hokushu, October 7, 1929. A shrub or small tree up to 20 feet high, with spreading branches and short thorns. The broadly ovate, serrate leaves are 2 to 3 inches long, and the corymbs of rather large white flowers with purple anthers are followed by bright-red fruits half an inch across. Native to eastern Siberia.

For previous introduction see No. 68414.

81732. DIERVILLA sp. Caprifoliaceae.

No. 1478. Growing wild in a field along the road near Kawazoe, October 12, 1929.

81733 and 81734. EUONYMUS spp. Celastraceae.

81733. EUONYMUS sp.

No. 1180. From trees along the trail up Moiwayama, near Sapporo, Hokushu, August 28, 1929.

81734. EUONYMUS sp.

No. 1454. From Chiaki Park, Akita, October 11, 1929. An ornamental shrub having a spread of about 8 feet and about 8 feet high.

81735. CELASTRUS ARTICULATUS Thunb. **Bittersweet.**

No. 1503. From Sapporo, Hokushu, October 3, 1929. A leafless vine with small clusters of fruit. The husk is parted and of a golden-yellow color, opening out and showing a 3-parted deep orange-red fruit.

81736. EUONYMUS sp.

No. 1504. From Sapporo, Hokushu, October 3, 1929. A beautiful shrub, densely covered wtih leaves which vary in color from green to deep red. The husk of the single orange-red fruit is red.

81737 and 81738. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

From the Hokushu Experiment Station, Kotoni, October 7, 1929.

81737. No. 1535. *Zairai shu* (original variety).

81738. No. 1536. *Botan saba.*

81726 to 81760—Continued.

81739. FRAGARIA sp. Rosaceae. Strawberry.

No. 1506. Plants obtained October 7, 1929. Developed by the main Hokushu Experiment Station at the Kotoni Experiment Station. *Kotoni.* A variety considered one of the best at the station. The fruits are very large and dark red.

81740. HORDEUM DISTICHON PALMELLA Harlan. Poaceae. Two-rowed barley.

No. 1531. From the Hokushu Experiment Station, Kotoni, October 7, 1929.

81741. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. Six-rowed barley.

No. 1530. From the Hokushu Experiment Station, Kotoni, October 7, 1929. *Sapporo Rokkaku* (Sapporo six row).

81742. LESPEDEZA STRIATA (Thunb.) Hook. and Arn. Fabaceae.

No. 1476. Along the road near Kawazoe, October 12, 1929.

81743 and 81744. LINUM USITATISSIMUM L. Linaceae. Flax.

From the Hokushu Experiment Station, Kotoni, October 7, 1929. Varieties developed by the station.

81743. No. 1537. *Sagino.*

81744. No. 1538. *Pelno No. 1.*

81745. MEIBOMIA JAPONICA (Miquel) Kuntze (*Desmodium podocarpum* DC.). Fabaceae.

No. 1493. Along the trail on Mowiayama, near Sapporo, Hokushu, October 7, 1929. A perennial, shrubby at the base, with herbaceous stems 2 to 3 feet high, trifoliolate leaves with membranous leaflets 2 to 3 inches long, and axillary and terminal racemes, often a foot long, of reddish pea-shaped flowers. Native to China and Japan.

For previous introduction see No. 60448.

81746 to 81748. ORYZA SATIVA L. Poaceae. Rice.

From the Hokushu Experiment Station, Kotoni, October 7, 1929.

81746. No. 1523. *Shihonga* (cross road). A variety of rice, adapted to very dry land.

81747. No. 1524. *Kairyo mochi ichigo.* From Imperial Station No. 1. A glutinous variety used for making a paste called *Mochi.*

81748. No. 1525. *Bozu rokuge* (Bozu No. 6).

81749 to 81753. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. Adsuki bean.

81749. No. 1488. From a farmer's field near Kawazoe, October 12, 1929. A very prolific variety with red seeds.

81750. No. 1489. From a farmer's field near Kawazoe, October 12, 1929. A very prolific early variety with mottled or marbled red and black seeds and rather different shaped leaves than other adsuki varieties.

81751. No. 1515. From the Hokushu Experiment Station, Kotoni, October 7, 1929. *Maruba* (round leaf). Medium-sized maroon seeds.

81752. No. 1516. From the Hokushu Experiment Station, Kotoni, October 7, 1929. *Sousei dairyu* (early large grain). Medium-large maroon seeds.

81726 to 81760—Continued.

81753. No. 1517. From the Hokushu Experiment Station, Kotoni, October 7, 1929. *Sousei maruba* (early round leaf). Medium-small maroon seeds.

81754 to 81758. PISUM SATIVUM L. Fabaceae. Pea.

From the Hokushu Experiment Station, Kotoni, Hokushu, October 7, 1929.

81754. No. 1518. *Nippon aka* (Japanese red).

81755. No. 1519. *Ball pea.* Small green peas.

81756. No. 1520. *French canning.* Small yellowish-green seeds.

81757. No. 1521. *Sapporo ao tenashi.* An improved strain of the *Ao tenashi,* which is very generally grown in Hokushu.

81758. No. 1522. From the Hokushu Experiment Station No. 6728. A yellowish-green seeded strain developed by the station.

81759. PRUNUS sp. Amygdalaceae. Cherry.

No. 1182. Cuttings collected near a shrine along Moiwayama, near Sapporo, Hokushu, October 6, 1929. A tree with light gray smooth bark, beautiful red leaves, and slightly astringent, black fruits.

81760. RAPHANUS SATIVUS L. Brassicaceae. Radish.

No. 1541. From the Gifu Agricultural Experiment Station, October 17, 1929.

81761 to 81786. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in October and November, 1929.

81761. No. 1425. Obtained from a factory making sugared soybeans, Sapporo, Hokushu, October 3, 1929. *Aojiro.* A variety with greenish-white seeds used in making sugared beans; also used as a vegetable. Said to be sweeter and to have a higher protein value than other varieties. The seeds were grown in Hokushu.

81762 to 81772. From the Akita Experiment Station, October 10, 1929.

81762. No. 1458. A variety native to Russia, with very small dull-black seeds and purple flowers.

81763 to 81768. *Moshito* (forage beans). Chinese varieties from Manchuria.

81763. No. 1459. Small shiny black seeds and white flowers.

81764. No. 1460. Purple flowers.

81765. No. 1461. Dull-black seeds and white flowers.

81766. No. 1462. Dull-black seeds and dull-purple flowers.

81767. No. 1463. Small glossy brown seeds and white flowers.

81768. No. 1464. Small glossy brown seeds and purple flowers.

81761 to 81786—Continued.

81769. No. 1465. Selection No. 502. A Chinese variety from Manchuria, with small glossy black seeds and purple flowers.

81770. No. 1466. Selection No. 503. A Chinese variety from Manchuria with small glossy brown seeds and purple flowers.

81771. No. 1467. Selection 504. A Chinese variety from Manchuria with small glossy brown seeds and purple flowers.

81772. No. 1468. Selection 505. A Chinese variety from Manchuria with small dull-black seeds and white flowers.

81773. No. 1484. From a farmer's field near Kawazoe, October 12, 1929. *Shirosawa* (white pod). An early yellow-seeded variety said to have been grown in this section for many years.

81774. No. 1485. From a farmer's field near Kawazoe, October 12, 1929. An early, gray, pubescent variety said to be native and grown in this section for many years. The seeds are straw yellow with a brown hilum.

81775. No. 1486. From the Akita Prefecture Horse Breeding Station, near Wada, October 12, 1929. A mixture of yellow-seeded varieties used for horse feed.

81776 to 81786. From the Hokushu Experiment Station, Kotoni, October 7, 1929.

81776. No. 1498. *Akazaya* (red pod). Station No. VI, 275 B. Seeds straw yellow with a dark-brown hilum.

81777. No. 1499. *Kurozaya* (black pod).

81778. No. 1500. *Chusei kura dairyu* (middle season). Tokachi Branch Station No. 3. Seeds medium sized and black.

81779. No. 1507. *Kenashi daizu*. A yellow-seeded variety developed by the station. It is resistant to the pod borer moth, one of the worst insect pests in Hokushu.

81780. No. 1508. *Tsurunoko* (young crane). Large yellow seeds with a pale hilum.

81781. No. 1509. *Oyachi ichigo* (Oyachi No. 1). A selection from Oyachi, one of the high-yielding varieties. The yellow seeds are medium sized with a deep-brown hilum.

81782. No. 1510. *Oyachi*. The Oyachi is quite generally grown in Hokushu and is a heavy yielding strain, but is very subject to attack by the pod borer moth. The yellow, medium-sized seeds have a brown hilum.

81783. No. 1511. *Gin daizu* (silver soybean). Station No. V, 35 B. Yellow, medium-sized seeds with a light-brown hilum.

81784. No. 1512. *Shiro shoyu* (small white). Yellow, medium-small seeds with a light-brown hilum.

81785. No. 1513. *Chusei hadaka* (middle season smooth). Yellow, rather small seeds with a brown hilum. It is quite resistant to attack by the pod borer moth.

81761 to 81786—Continued.

81786. No. 1514. *Kuro daizu* (black soybean). Small round black seeds with green cotyledons.

81787 to 81807.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in October and November, 1929.

81787. STEWARTIA PSEUDO-CAMELLIA Maxim. Theaceae. **Japanese stewartia.**

No. 1414. From the Botanic Garden, Hokushu Imperial University, Sapporo, October 2, 1929. A handsome tree, native to Japan, 50 feet high, with erect branches and red bark. The thickish obovate-lanceolate leaves are bright green, and the large white flowers are borne in summer.

For previous introduction see No. 77866.

81788. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

No. 1487. From a field near Kawazoe, Akita Prefecture, October 12, 1929.

81789. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

No. 1379. From plants growing in waste places near the seashore in the vicinity of Shiraoi, an Ainu village, southern Hokushu, September 29, 1929. A variety with large white flowers.

81790 to 81793. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From the Hokushu Experiment Station, Kotoni, October 7, 1929.

81790. No. 1526. *Sapporo haru komugi ichigo*. (Sapporo spring No. 1.) A spring wheat developed by the Kotoni station.

81791. No. 1527. *Sapporo haru komugi jugo* (Sapporo spring No. 10).

81792. No. 1528. *Marching No. 8*. A fall wheat developed by the Kotoni station.

81793. No. 1529. *Akagawa Ako Ichigo* (red skin red No. 1).

A fall variety developed by the Kotoni station.

81794 to 81797. VACCINIUM spp. Vacciniaceae.

81794 and 81795. VACCINIUM CILIATUM Thunb.

81794. No. 1419. From the Botanic Garden, Hokushu Imperial University, Sapporo, October 2, 1929. An upright branching deciduous shrub up to 15 feet high, with pubescent branchlets and ovate ciliolate-margined leaves, 2 to 4 inches long, which turn bright crimson in the autumn. The nodding bell-shaped reddish flowers are in short racemes and are followed by edible black berries a quarter of an inch in diameter. Native to Japan and Chosen.

81795. No. 1452. From Chiaki Park, Akita, October 11, 1929. A shrub about 12 feet high with racemes of blackish-purple fruit. It may be the same variety as that obtained from the Botanic Garden at Sapporo [No. 81794], but the va-

81787 to 81807—Continued.

riety from Chiaki Park bears a greater abundance of much larger fruits.

81796. VACCINIUM JAPONICUM Miquel.

No. 1495. From the Sapporo Botanic Garden, Hokushu, October 7, 1929.

81797. VACCINIUM PRAESTANS Lamb.

No. 1417. From the Botanic Garden, Hokushu Imperial University, Sapporo, October 2, 1929. A deciduous low shrub resembling the wintergreen (*Gaultheria procumbens*) in habit. The obovate leaves are 1 to 2 inches long, and the small pinkish-tinged white flowers are followed by bright-red sweet edible fruits, half an inch in diameter, with a strawberrylike fragrance. Native to northern Japan.

81798 to 81801. VIBURNUM spp. Caprifoliaceae.

81798. VIBURNUM sp.

No. 1412. Near the seashore in the vicinity of Shiraoi, Hokushu, September 29, 1929. A shrub about 6 feet high, with bright-red fruits.

81799. VIBURNUM sp.

No. 1469. From Chiaki Park, Akita, October 11, 1929. A shrub with bright-red berries.

81800. VIBURNUM sp.

No. 1472. Along the road near Kawazoe, October 12, 1929. A shrub with bright-red berries.

81801. VIBURNUM sp.

No. 1491. Along the trail to Moiwayama, near Sapporo, Hokushu, October 7, 1929.

81802. VICIA sp. Fabaceae. Vetch.

No. 1424. A wild legume growing along the roadside near Sapporo, Hokushu, October 2, 1929.

81803. VICIA sp. Fabaceae. Vetch.

No. 1441. Found abundantly in waste places near Maruyama Park, Sapporo, Hokushu, October 5, 1929. Plants 2 to 3 feet high.

81804 and 81805. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

81804. No. 1000. From a field near Honjo, August 9, 1929. The plants are more upright and of a bushy growth with no tendency to vine; the seeds are red and used when green in the same way as blackeyed peas and the dried peas are used when cooked.

81805. No. 1490. From a farmer's field near Kawazoe, October 12, 1929. A black-seeded cowpea which is rather early and has no tendency to vine.

81806. ZANTHOXYLUM PIPERITUM (L.) DC. Rutaceae. Japanese prickly-ash.

No. 1481. From thorny shrubs along the road near Kawazoe, October 12, 1929. A shrub or small tree with pubescent branchlets and slender prickles in pairs. The compound leaves are made up of 11 to 19 oblong-ovate leaflets, and the small corymbs of greenish flowers are followed by red fruits which open and reveal the black seeds. The young leaves are used as a condiment. Native to northern China, Chosen, and Japan.

81787 to 81807—Continued.

81807. ZEA MAYS L. Poaceae. Corn.

No. 1382. From the Ainu village of Shiraoi, Hokushu, September 29, 1929.

81808. TERMINALIA BENTZOE (L.) Pers. Combretaceae.

From Port Louis, Mauritius. Seeds presented by D. d'Emmerez de Charmoy, Director, Department of Agriculture. Received November 16, 1929.

A handsome tropical evergreen tree with lanceolate leaves, inconspicuous flowers, and narrowly 2-winged fruits. Native to the Malay Archipelago.

81809. TERMINALIA SERICEA Burchell. Combretaceae.

From Salisbury, Southern Rhodesia, Africa. Seeds presented by the Secretary of the Department of Agriculture. Received November 16, 1929.

A well-shaped ornamental tropical evergreen tree up to 30 feet high, with a flat crown, silvery white foliage, and yellow wood of excellent quality. Bark cloth of poor quality is made from the bark.

For previous introduction see No. 61687.

81810 to 81817.

From Russia. Seeds collected by H. L. Westover, Bureau of Plant Industry. Received November 14, 1929.

81810. ANDROPOGON ISCHAEMUM L. Poaceae. Grass.

No. 325. A wild grass found in the vicinity of Sukhum, Caucasus Mountains, October 11, 1929. A leafy variety, 3 to 4 feet high, producing a large quantity of coarse feed.

81811. BRACHYPODIUM SYLVATICUM (Huds.) Beauv. Poaceae. Grass.

No. 326. A wild grass found on partially shaded slopes at Sukhum, Caucasus Mountains, October 11, 1929.

For previous introduction see No. 78771.

81812. CASTANEA SATIVA Mill. Fagaceae. Spanish chestnut.

No. 323. From the Caucasus Mountains, south of Armavir, October 7, 1929.

81813. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. Millet.

No. 327. From the Sukhum Experiment Station, Caucasus Mountains, October 12, 1929. A type with long panicles.

81814. EUCHLAENA MEXICANA × ZEA MAYS. Poaceae. Teosinte-maize hybrid.

No. 321. From the Sukhum Experiment Station, Caucasus Mountains, October 10, 1929.

81815 and 81816. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

81815. No. 324. A wild alfalfa growing on the slopes of the Caucasus Mountains, Sukhum Experiment Station, October 11, 1929.

81816. No. 328. A wild plant from northeastern Turkestan, August 29, 1929.

81810 to 81817—Continued.

81817. TRIFOLIUM sp. Fabaceae. **Clover.** No. 322. Obtained in the forest, Sukhum Experiment Station, October 10, 1929.

81818. OXYTROPIS PILOSA (L.) DC. Fabaceae.

From Russia, Union of Socialistic Soviet Republics. Seeds presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures, Leningrad. Received November 19, 1929.

No. 1335. From the Botanical Garden of Saratof University. An upright or ascending herbaceous perennial about 15 inches high, densely covered with soft spreading hairs. It has a short rootstock, pinnate leaves, and bright-yellow flowers in an ovoid raceme. Native to central Europe.

81819. CITRUS sp. Rutaceae. **Cuban shaddock.**

From Holguin, Cuba. Seeds presented by Thomas R. Towns. Received November 21, 1929.

A shaddock used as a stock for citrus varieties in Cuba; especially good for navel orange, but not for grapefruit or the kumquat.

For previous introduction see No. 77306.

81820 to 81822.

From Newry, Ireland. Seeds purchased from T. Smith, Daisy Hill Nursery. Received November 19, 1929.

81820. GERANIUM IBERICUM Cav. Geraniaceae. **Iberian cranesbill.**

A herbaceous perennial, 1 to 2 feet high, with an erect villous stem branching at the top. The opposite leaves are 5-parted to 7-parted and the violet flowers, an inch across, are borne in open panicles. Native to Spain and Portugal.

81821. IRIS GRAMINEA L. Iridaceae. **Grass iris.**

A dwarf beardless iris with strongly ribbed linear leaves 12 to 18 inches long, and flowers with lilac outer segments with a yellow claw and erect red-purple style branches and inner segments. The plant is valued chiefly for its freesialike scent. Native to central and southern Europe.

81822. MORAEA SPATHULATA (L. f.) Klatt (*M. spathacea* Ker). Iridaceae.

A bulbous perennial with a single linear-falcate, strongly ribbed basal leaf 2 feet high and a stout stem, 2 to 3 feet tall, bearing a cluster of bright-yellow flowers. Native to southern Africa.

81823. FICUS RELIGIOSA L. Moraceae. **Sacred bo tree.**

From Kirkee, Poona, Bombay Presidency, India. Seeds presented by the Superintendent of the Ganeshkhind Botanical Gardens. Received November 19, 1929.

A large tropical tree up to 100 feet high, with the rotund-ovate coriaceous leaves suspended on slender petioles 4 inches long, and with the apex produced into a long linear-lanceolate, taillike appendage. The dark-purple axillary fruits are about half an inch in diameter. Native to India.

81824 and 81825. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Russia, Union of Socialistic Soviet Republics. Cuttings and scions presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures. Received November 23, 1929.

81824. *Cadu Khurmai.*

81825. No. 109093. From Turkestan. *Khurmai.*

81826 to 81830.

From Hanover, Germany. Plants purchased from Hermann A. Hesse. Received November 23, 1929.

81826 to 81828. CHRYSANTHEMUM MAXIMUM Ramond. Asteraceae. **Pyrenees chrysanthemum.**

81826. *Hildegard von Grüter.* Plant tall, about 28 inches high, blooming in July; disk yellow and very small. This is especially suitable for cut flowers, on account of its prolific blooming and stiff stems.

81827. *Lockenkopf.* Plant about 2 feet high, blooming in July and August. The large dazzling white flowers, with three or four series of deep-cut ray flowers, remind one of "ostrich feather asters."

81828. *Niobe.* One of the finest sorts with unusually large pure-white heads. The ray flowers are lightly undulate.

81829. DAPHNE ALPINA L. Thymelaeaceae. **Alpine daphne.**

An erect alpine shrub 2 feet high, with narrow deciduous leaves, and fragrant white or pinkish flowers in terminal clusters. Native of Europe.

For previous introduction see No. 79200.

81830. DAPHNE CAUCASICA Pall. Thymelaeaceae. **Caucasian daphne.**

A hardy deciduous shrub, up to 4 feet high, with lanceolate leaves and fragrant white flowers in terminal heads of 3 to 20 flowers. Native to the Caucasus region.

For previous introduction see No. 79203.

81831 and 81832.

From Rumania. Seeds obtained through H. L. Westover, Bureau of Plant Industry. Received November 25, 1929.

81831. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Transylvania.

81832. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Moldova.

81833. JUGLANS FORMOSANA Hayata. Juglandaceae.

From San Marino, Calif. Nuts presented by William Hertrich, Superintendent, Huntington Botanic Garden. Received November 25, 1929.

A very ornamental tree which is nearly evergreen at San Marino, Calif. The nuts resemble the butternut (*Juglans cinerea*) in size and shape. Native to Taiwan.

81834 to 81841. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Tashkent, Turkestan, Union of Socialistic Soviet Republics. Seeds presented by the Turkestan Plant Breeding Station. Received November 25, 1929.

81834 to 81839. GOSSYPIUM HERBACEUM L.

81834. No. 455 A. From West Pamirian.

81835. No. 2522 B. From Khoresm.

81836. No. 2929. From Khanabad, Afghanistan.

81837. No. 3101. From Khoresm.

81838. No. 5028. From Smyrna, Turkey.

81839. No. 7172. From Artysh, near Kashgar, Sinkiang, China.

81840 and 81841. GOSSYPIUM HIRSUTUM L. **Upland cotton.**

81840. No. 0100. *Navrotsky.*

81841. No. 1838. Bred by the Turkestan Plant Breeding Station by means of hybridization.

81842 and 81843. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. **Avocado.**

From Mexico. Scions collected by C. V. Newman, President, and George B. Hodgkin, Manager, Calavo Growers of California, Los Angeles, Calif. Received November 26, 1929.

81842. No. 1. *Atlisco.*

81843. No. 2. *Atlisco.*

81844. ANNONA RETICULATA L. Annonaceae. **Sugar-apple.**

From Papeete, Tahiti. Seeds presented by Dr. Gerrit P. Wilder. Received November 29, 1929.

A variety of custard-apple introduced into Tahiti 50 years ago by Mr. Goupil, a Frenchman who had a coconut plantation near Papeete. It has a white skin when ripe, and a creamy white, fine-grained pulp of excellent flavor.

81845. RICINODENDRON RAUTANENII Schinz. Euphorbiaceae.

From Mount Silinda, Melsetter District, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received September 19, 1929.

Muzgomo. A large tree, sometimes 3 or 4 feet in diameter, with delicious edible nuts, though the shell is hard and tough. The kernel is inclosed within a second hard shell within the outer shell.

For previous introduction see No. 50029.

81846 and 81847. LACHENALIA spp. Liliaceae. **Cape-cowslip.**

From Cape Town, Union of South Africa. Seeds purchased from Charles Howie & Co. Received November 30, 1929.

81846. LACHENALIA ORCHIOIDES (L.) Ait.

A herbaceous perennial with a bulb about an inch in diameter from which arise usually two strap-shaped, smooth, spotted leaves. The spike of cylindrical, white, yellow, or red flowers is borne on a spotted peduncle a foot high. Native to southern Africa.

81846 and 81847—Continued.

81847. LACHENALIA PUSTULATA Jacq.

A herbaceous perennial with a bulb about half an inch in diameter and two fleshy, sword-shaped leaves, 9 inches long, having pustules on the upper surface. The white or reddish tinged campanulate flowers are borne in a dense raceme, 2 to 3 inches long, on a peduncle 6 inches long. Native to southern Africa.

81848. DIPELTA VENTRICOSA Hemsl. Caprifoliaceae.

From Keston, Kent, England. Plants purchased from G. Reuthe, Foxhill Hardy Plant Farm. Received December 5, 1929.

A deciduous shrub, 6 to 15 feet high, with downy young shoots and oval to ovate-lanceolate leaves 2 to 6 inches long. The bell-shaped flowers are about an inch long and borne on drooping pedicels at the end and in the leaf axils of short side shoots. The corolla is deep rose outside and paler within except in the throat, which is orange colored. Native to western China.

For previous introduction see No. 40178.

81849. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From Peru. Seeds presented by Dr. Wilson Popenoe, Research Department, United Fruit Co. Received November 25, 1929.

A thick-fleshed variety.

81850. POPULUS GENEROSA A. Henry. Salicaceae. **Poplar.**

From Winnipeg, Manitoba, Canada. Cuttings presented by Prof. F. W. Broderick, Department of Horticulture and Forestry, Agricultural College, University of Manitoba. Received November 13, 1929.

According to its originator, Dr. Augustine Henry, this hybrid poplar is intermediate in characters between its parents, *Populus angulata* and *P. trichocarpa.* It is a rapid-growing, unusually vigorous tree with coarsely serrate leaves which are pale gray beneath.

For previous introduction see No. 62111.

81851. ADONIDIA MERRILLII Beccari (*Normanbya merrillii* Beccari). Phoenicaceae. **Palm.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received October 1, 1929.

Bonga de China or *bonga de Jolo.* A medium-sized palm with graceful somewhat curved pinnate leaves resembling the common betel-nut palm but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see No. 73693.

81852. FRITILLARIA CAMSCHATCENSIS (L.) Ker. Liliaceae. **Black lily.**

From Sapporo, Hokushu, Japan. Bulbs collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 1, 1929.

No. 1017. Obtained from the Sapporo Botanic Garden, September 2, 1929. A lilylike bulbous perennial with 1-flowered to 3-flowered stems 6 to 18 inches high.

81852—Continued.

The 10 to 15 leaves are lanceolate, the lower ones in whorls; and the livid wine-purple flowers are about an inch long. Native to Siberia and Alaska.

81853. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

From Melbourne, Victoria, Australia. Trees presented by J. M. Ward, Superintendent of Horticulture, Department of Agriculture. Received October 3, 1929.

Elsie Grant.

81854. CINNAMOMUM MINDANAENSE Elmer. Lauraceae. **Kami.**

From Lipa, Batangas, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received October 2, 1929.

A small erect tropical tree, up to 30 feet high, with slender branches, smooth pale-green bark, and small pointed leathery leaves. The inconspicuous flowers are followed by numerous small shining steel-blue fruits. The bark is very similar to the cinnamon of commerce, and the tree has possibilities as a source of cinnamon. Native to the Philippines.

For previous introduction see No. 79546.

81855. HEDEOMA PIPERITA Benth. Menthaceae.

From Mexico City, Mexico. Seeds presented by A. L. Herrera, Director, Dirección de Estudios Biologicos. Received October 3, 1929.

A small annual mint with bright-green leaves less than an inch long and open spikes of white flowers, each having two red spots. Native to Mexico and a possible source of menthol.

81856. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Ariana, near Tunis, Tunisia, Africa. Seeds presented by F. Boeuf, Chief, Botanical Service. Received October 3, 1929.

81857 to 81864. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Honolulu, Hawaii. Cuttings presented by H. L. Lyon, in charge, Department of Botany and Forestry, Experiment Station, Hawaiian Sugar Planters' Association. Received October 7, 1929.

81857. No. 28–245.

81858. No. 28–4997.

81859. No. 28–5009.

81860. No. 28–5055.

81861. No. 28–5019.

81862. No. 28–5114.

81863. No. 28–5118.

81864. Unnumbered variety (Striped Tip).

81865 to 81883. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From India. Seeds presented by the Associate Professor of Botany, Punjab Agricultural College, Lyallpur, through Renwick S. McNiece, American consul, Karachi. Received October 4, 1929.

81865 to 81883—Continued.

81865. *D. J. Khan No. 1.* From the Northwest Frontier Province. A variety with yellow skin which is segmented by prominent black lines.

81866. *D. J. Khan No. 2.* From the Northwest Frontier Province. A variety with yellow skin which is segmented by green lines.

81867. *Jhang No. 1.*

81868 to 81871. From Jullunder.

81868. No. 1. *Phillauni Sufaida.* A white-fleshed variety.

81869. No. 2. *Local Sufaid.* A white-fleshed variety.

81870. No. 3. *Chenai white.* A white-fleshed variety.

81871. No. 4. *Nakodri red.* A red-skinned variety.

81872 to 81883. From Lyallpur.

81872. No. 1. A round variety with a smooth yellow skin.

81873. No. 2. An ovoid variety with a rough yellow skin.

81874. No. 3. An ovoid, ribbed, yellow-skinned variety.

81875. No. 4. A round, ribbed, yellow-skinned variety.

81876. No. 5. A round, yellow, smooth-skinned variety.

81877. No. 6. A round, yellow-skinned variety segmented with green lines.

81878. No. 7. A round, yellow-skinned variety segmented with green lines.

81879. No. 8. A round variety with greenish-yellow rough skin.

81880. No. 9. A round, reddish-yellow, smooth-skinned variety.

81881. No. 10. A round variety with reddish-yellow, smooth skin.

81882. No. 11. A round, yellow-skinned variety segmented with thin lines.

81883. No. 1. *Shorkot.*

81884 to 81914.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 1, 1929.

81884 to 81886. DELPHINIUM spp. Ranunculaceae. **Larkspur.**

From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929.

81884. DELPHINIUM CONSOLIDA L. **Field larkspur.**

No. 1145. An erect hairy annual, native to Europe, about 1½ feet high, with blue or white flowers in loose panicles.

For previous introduction see No. 53044.

81885. DELPHINIUM ORIENTALE J. Gay.

No. 1147. An annual larkspur which closely resembles the rocket larkspur, *Delphinium ajacis,* but differs in being a foot to a foot and a half high, with an upright, branching stem bearing numerous dense racemes of violet, pink, or white flowers. Native to southern Europe.

81884 to 81914—Continued.

81886. DELPHINIUM PYLZOWI Maxim.

No. 1146. A larkspur, native to China, with a leafy stem, 5-parted leaves, and attractive flowers with violet sepals and blackish petals.

For previous introduction see No. 62127.

81887. FRAGARIA sp. Rosaceae. **Strawberry.**

No. 1151. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929. A species said to be grown in the mountain regions at high altitudes.

81888. LATHYRUS sp. Fabaceae.

No. 1155. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929.

81889. LONICERA sp. Caprifoliaceae. **Honeysuckle.**

No. 1159. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929. A yellow-fruited species.

81890. LONICERA sp. Caprifoliaceae. **Honeysuckle.**

No. 1161. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929.

81891 and 81892. PICRASMA QUASSIOIDES (Don) Bennett. Simaroubaceae.

A tree 15 to 25 feet high, with seeds varying from peacock green to purple. Its chief ornamental value consists in the handsome foliage which turns orange and scarlet in the autumn, and the bright-red fruits.

For previous introduction see No. 40188.

81891. No. 1163. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929.

81892. No. 1181. Along the trail up Moiwayama, near Sapporo, Hokushu, August 28, 1929.

81893. RUBUS sp. Rosaceae.

No. 1142. Along roadsides near Sapporo, Hokushu, August 22, 1929. A species with trifoliolate leaves white underneath, and rather large, bright-red fruits.

81894. RUBUS sp. Rosaceae.

No. 1164. From a farmers' market at Sapporo, Hokushu, August 26, 1929. A dwarf species, more or less of a runner, with trifoliolate leaves white underneath, and beautiful red fruits of a good flavor.

81895 to 81897. SAMBUCUS spp. Caprifoliaceae. **Elder.**

From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929.

81895. SAMBUCUS LATIPINNA Nakai.

No. 1156. An ornamental shrub with compound leaves made up of three to five broadly elliptic leaflets, small white flowers in a hemispheric cluster, and attractive yellow fruits. Native to Chosen.

For previous introduction see No. 80715.

81896. SAMBUCUS SIEBOLDIANA XANTHOCARPA Nakai.

No. 1157. Fruits bright red.

81884 to 81914—Continued.

81897. SAMBUCUS sp.

No. 1158. Fruits bright pink.

81898. PANAX REPENS Maxim. Araliaceae.

No. 1184. Woods along the trail up Moiwayama, near Sapporo, Hokushu, August 28, 1929. A hardy herbaceous perennial with an elongated creeping rhizome, digitately 5-parted leaves, and globose, paired, bright-red fruits.

81899. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

No. 1012. From a tofu or bean curd factory in Sapporo, Hokushu, August 30, 1929. A variety considered by this factory to be the best for making tofu; from 5 to 8 bushels are used daily. The beans are grown in Tokachi Province, the leading soybean section of Hokushu.

81900 to 81906. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

81900. No. 1001. Near the railroad station at Asamushi, August 16, 1929.

81901. No. 1002. Along the roadside in the Sapporo Botanic Garden, Hokushu, August 19, 1929.

81902. No. 1003. From a field in the Maruyama Park, Sapporo, Hokushu, August 19, 1929.

81903. No. 1004. Along a roadside near Kotoni, Hokushu, August 22, 1929.

81904. No. 1005. From a field between Kotoni and Sapporo, Hokushu, August 22, 1929. This plant was much earlier than others and made an abundance of heads much smaller than other plants near by.

81905. No. 1006. Along the roadside near Shiroishi, Hokushu, August 24, 1929.

81906. No. 1008. From plants on top of Moiwayama, near Sapporo, Hokushu, at an altitude of 1,500 feet, August 28, 1929.

81907. ULMUS JAPONICA Sarg. Ulmaceae. **Japanese elm.**

No. 1192. From the Imperial Botanical Garden, Hokushu University, Sapporo, September 2, 1929. An elm considered as fine a lawn and park tree as the American elm, *Ulmus americana*. There are some beautiful specimens in the Botanical Garden and campus of the Hokushu Imperial University and along the streets of Sapporo.

For previous introduction see No. 76469.

81908. VACCINIUM HIRTUM SMALLII (A. Gray) Maxim. Vacciniaceae.

No. 1162. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929. A shrub 4 to 6 feet high, with spreading branches, oblong-lanceolate leaves 1 to 3 inches long, and 1-flowered to 3-flowered clusters of red campanulate flowers followed by black berries. Native to Japan.

81909. VACCINIUM sp. Vacciniaceae.

No. 1168. Growing at an altitude of 1,600 feet on Moiwayama, near Sapporo, Hokushu, August 28, 1929. Plants 12 to 18 inches high.

81884 to 81914—Continued.

81910. VIBURNUM sp. Caprifoliaceae.

No. 1165. From the Sapporo Botanic Garden, Sapporo, Hokushu, August 26, 1929.

81911 to 81913. VICIA spp. Fabaceae. **Vetch.**

81911. VICIA SATIVA L. **Common vetch.**

No. 1129. Along the roadside between Kotoni and Sapporo, Hokushu, August 22, 1929. Flowers large and single, with purple standard and pink keel.

81912. VICIA sp.

No. 1007. Along the railroad near Shiroishi, Hokushu, August 24, 1929. A species bearing medium-sized purple flowers.

81913. VICIA sp.

No. 1141. Along the roadside between Kotoni and Sapporo, Hokushu, August 22, 1929. Racemes of purple flowers.

81914. (Undetermined.)

No. 1189. From the woods along the trail up Moiwayama, near Sapporo, Hokushu, August 28, 1929. A variety about 30 inches high, producing bright-red fruits.

81915 to 81917. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

From Lalla, Tasmania, Australia. Trees purchased from Frank Walker. Received October 8, 1929.

81915. *Lalla.* A sport from a Delicious apple tree which produced a bright, full, red fruit. The flesh is, perhaps, slightly firmer than the Delicious, but in no other respect except in the brilliance of its color is there any noticeable difference.

81916. *Tasma.* This is the most popular and well known of all the apples raised in Tasmania. It is a late variety, highly colored, and a good keeper. Though not possessing a delicate flavor, it is eagerly sought for dessert purposes because of its deep brilliant red color.

81917. *Tasman's Pride.* This is essentially a dessert apple possessing a good flavor, besides being highly colored and juicy. While not being classed as a keeping variety, it may be held for a fair period in cold storage; it is very similar to the Jonathan in this respect.

81918 to 81920. LATHYRUS spp. Fabaceae.

From London, England. Seeds presented by T. Hay, of the Park Superintendent's Office, Hyde Park. Received October 7, 1929.

81918 and 81919. LATHYRUS MAGELLANICUS Lam. **Lord Anson pea.**

A strong-growing, woody, almost evergreen species, usually a perennial, covered with a bluish bloom. The smooth, angled, somewhat branched stem is 3 to 5 feet long, the leaflets are ovate or oblong-linear, and the dark purplish-blue flowers are on long peduncles. Native to southern South America.

81918 to 81920—Continued.

For previous introduction see No. 40875.

81918. Combes No. 868. Andean expedition. A pale-purple form.

81919. Combes No. 713. Andean expedition. A dark-purple form which received the Royal Horticultural Society's Award of Merit.

81920. LATHYRUS NERVOSUS Lam. **Anson pea.**

A glabrous plant with stems about a foot long and leaves composed of two nearly sessile, large, oval, acute leaflets with conspicuous reticulate nerves. The solitary peduncles, 2 inches long, bear five to seven purple flowers. Native to Uruguay.

For previous introduction see No. 40876.

81921 and 81922.

From Lavras, Minas Geraes, Brazil. Seeds presented by B. H. Hunnicutt, Instituto Gammon, through Carlton Jackson, commercial attaché, Rio de Janeiro, Brazil. Received October 7, 1929.

81921. PITHECOLLOBIUM AUAREMONTEMO Mart. Mimosaceae.

A vine bearing seeds which are commonly used for making necklaces.

81922. DOLICHOLUS PHASEOLOIDES (Swartz) Kuntze (*Rhynchosia phaseoloides* DC.). Fabaceae. **Rosarybean.**

A slender climber with trifoliolate leaves, borne upon slender wiry stems, which suggest those of the common bean (Phaseolus). The plant is of interest chiefly for the small bright-red seeds, with a black eye, which are strikingly similar to those of *Abrus precatorius,* the crab's eye of the West Indies.

For previous introduction see No. 80090.

81923 and 81924.

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens. Received October 7, 1929.

81923. ERYTHRINA VARIEGATA ORIENTALIS (L.) Merr. (*E. lithosperma* Blume). Fabaceae. **Dadap.**

A moderate-sized spineless leguminous tree native to the East Indies. It is of very rapid growth, with trifoliolate leaves and red flowers. In Ceylon the tree is used to shade crop plants, and also the foliage is lopped for use as green manure. It is being tested as a cover plant at the experiment station in Peradeniya.

For previous introduction see No. 68855.

81924. TERMINALIA KAERNBACHII Warb. Combretaceae. **Okari nut.**

A tropical evergreen tree, native to New Guinea, with very thick ash-brown branches and oblong-ovate leaves, a foot long, which are hairy beneath when young. The edible seeds, over an inch long, are inclosed in an ovoid drupe over 2 inches long.

81925. GARCINIA DIVES Pierre. Clusiaceae.

From Tanauan, Atimonan, Tayabas, Philippine Islands. Seeds presented by S. Youngberg, Director, Bureau of Agriculture, Manila. Received October 14, 1929.

81925—Continued.

Bilucao. A slender tree up to 30 feet high, with elliptical-lanceolate leaves, small inconspicuous flowers in the axils of the leaves, and globose fruits, about an inch in diameter, which are reported to be edible. Native to the Philippine Islands.

81926 and 81927.

From Bataan Province, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received October 14, 1929.

81926. SANDORICUM KOETJAPE (Burm. f.) Merr. Meliaceae. **Santol.**

An evergreen tree, native to the Philippine Islands, which becomes 80 feet high in its native country. It has trifoliolate, hairy leaves and greenish-yellow or straw-colored flowers. The chief value resides in its yellowish fruits, which are rounded or flattened, about 2 inches in diameter, with rather large seeds inclosed in translucent, acid, edible pulp of good flavor. The fruit makes a delicious preserve. This tree is not suited for cultivation in the United States except perhaps in the warmest parts of Florida.

For previous introduction see No. 79558.

81927. UVARIA RUFA (Dunal) Blume. Annonaceae.

Banawak. A much-branched shrub, native to Java, with a stem between 4 and 6 inches in diameter and alternate, elliptic-oblong, acute, or obtuse leaves 2 to 5 inches long. The purplish-red, solitary flowers are about an inch wide. The oblong kidney-shaped red fruits, about 1½ inches long, are in bunches of 18 to 20, with whitish, scanty flesh which is juicy, aromatic, and subacid, without a trace of sugar, and containing many seeds.

For previous introduction see No. 44091.

81928. CAPPARIS MICRACANTHA DC. Capparidaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received October 14, 1929.

Dauag. A large straggly spiny evergreen shrub or small tree with smooth bark and short stiff spines. The coriaceous shining, broad-lanceolate leaves are 4 to 8 inches long, and the white flowers, two to four in a series in vertical lines on the branches, are 1½ inches across. The smooth, subglobose fruits, 2 to 3 inches long, are a beautiful apple red and have a good flavor.

For previous introduction see No. 51191.

81929 to 81931.

From Georgetown, Demerara, British Guiana. Seeds presented by A. A. Abraham, Assistant Superintendent, Botanic Gardens. Received October 15, 1929.

81929. MARTINEZIA CORALLINA Mart. Phoenicaceae. **Palm.**

A spiny palm with pinnate leaves about 9 feet long, and clusters, 2 to 3 feet long, of small white flowers followed by bright-red fruits nearly an inch in diameter. The pale-brown seeds are used for necklaces. Native to the island of Martinique, French West Indies.

81929 to 81931—Continued.

For previous introduction see No. 81592.

81930. THRINAX PARVIFLORA Swartz. Phoenicaceae. **Jamaica thatch palm.**

An unarmed fan palm with a ringed trunk up to 20 feet high, circular leaves 1 to 2 feet across and divided on the margin into bifid segments, and inconspicuous flowers and fruits. Native to Jamaica.

81931. (Undetermined.)

81932 to 81934. ALLIUM CEPA L. Liliaceae. **Onion.**

From Santa Cruz, Teneriffe, Canary Islands. Seeds purchased from C. Garcia Dorta. Received October 19, 1929.

81932. *Crystal Wax.*

81933. *Red Bermuda.*

81934. *Yellow Bermuda.*

81935. GARCINIA MANGOSTANA L. Clusiaceae. **Mangosteen.**

From Peradeniya, Ceylon. Seeds presented by T. W. Parsons, Curator, Royal Botanic Gardens. Received October 21, 1929.

A delicious fruit about the size of a mandarin orange, round and slightly flattened at each end, with a thick, smooth, rich red-purple rind, which, when cut, exposes the white segments lying loose in the cups. The inside cup surface of the rind is a most delicate pink. The separate segments are whitish and covered with a delicate network of fibers. The texture of the pulp resembles that of the plum, and the flavor is indescribably delicious.

81936. STYLOSANTHES ERECTA Beauv. Fabaceae.

From Boma, Belgian Congo, Africa. Seeds presented by the Secrétaire Général, Congo Belge, Gouvernement Général. Received October 17, 1929.

A copiously branched ascending shrub about 4 feet high, with broad, rather stiff, compound leaves, and terminal oblong heads of inconspicuous flowers. It is native to tropical Africa and is said to be of value as a fodder plant.

For previous introduction see No. 56798.

81937. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Honolulu, Hawaii. Bud wood presented by W. T. Pope, Horticulturist of the Agricultural Experiment Station, through Eugene May, Bureau of Plant Industry. Received October 17, 1929.

Victoria.

81938 to 81940. PANDANUS spp. Pandanaceae. **Screwpine.**

From Buitenzorg, Java. Seeds presented by Dr. W. M. Docters van Leeuwen, Director, Botanic Gardens. Received November 12, 1929.

81938. PANDANUS AFFINIS Kurz.

A low shrubby evergreen closely related to *Pandanus foetidus,* with limp, swordlike leaves, 4 to 6 feet long, which are spiny along the midribs and margins. Native to Ceylon.

81938 to 81940—Continued.

For previous introduction see No. 72602.

81939. PANDANUS ATROCARPUS Griffith.

A tree, 40 to 60 feet high and about 6 inches in diameter, with linear acuminate dark-green leaves, 20 feet long and 4 inches wide, which are used for making coverings for carts, screens, hats, etc. The fragrant white spikes are 4 to 6 inches long, and the fruits an inch long.

For previous introduction see No. 51727.

81940. PANDANUS VANDERMEESCHII Balf. f.

A screwpine, native to the island of Mauritius, up to 20 feet high, having lateral branches 8 feet long and stiff, suberect leaves 2 feet long.

For previous introduction see No. 72608.

81941. HYLOCEREUS sp. **Cactaceae.**
Nightblooming cereus.

From Honolulu, Hawaii. Cuttings obtained through T. C. Zchakke, by W. A. Lloyd, Extension Service, United States Department of Agriculture. Received October 22, 1929.

From the Pan-Pacific Club in Honolulu.

One of the epiphytic, moisture-loving cacti, with a 3-angled stem. By means of aerial roots it clings to trees and walls and climbs to great heights in tropical America, where this genus is native.

81942 to 81945.

From Burringbar, New South Wales, Australia. Seeds presented by B. Harrison. Received October 18, 1929.

81942. DANTHONIA SEMIANNULARIS (Labill.) R. Br. Poaceae. **Grass.**

A perennial, fine-leaved, tussocky grass, 1 to 2 feet high, which provides feed for the greater part of the year. It is said to be a good winter grass, will stand a great amount of grazing, and its palatability both for cattle and sheep is well known.

For previous introduction see No. 74412.

81943. EHRHARTA CALYCINA J. E. Smith. Poaceae. **Perennial veldt grass.**

A heavy-yielding drought-resistant and nutritious grass which grows to a height of over 4 feet and seeds profusely. It promises to outrival even the famous Rhodes grass, and should prove valuable to stock owners, especially in dry districts.

For previous introduction see No. 77436.

81944. LOLIUM LOLIACEUM (Bory and Chaub.) Hand.-Mazz. (*L. subulatum* Vis.). Poaceae. **Grass.**

An annual bunch grass with much-branched slender prostrate or ascending stems 2 to 8 inches long. Native to dry sandy places along the coast of southeastern Europe.

81945. LUPINUS HIRSUTUS L. Fabaceae.
European blue lupine.

An ovate-leaved lupine used for forage and green manure.

For previous introduction see No. 75914.

81946. ALLAGOPTERA CAUDESCENS (Mart.) Kuntze (*Diplothemium caudescens* Mart.). Phoenicaceae.
Palm.

From Georgetown, Demerara, British Guiana. Seeds presented by A. A. Abraham, Assistant Superintendent, Botanic Gardens. Received December 23, 1929.

A stout palm up to 25 feet high, with a trunk a foot in diameter and a crown of pinnate leaves 9 to 12 feet long, made up of narrowly lanceolate segments which are green above and silvery beneath. Native to Brazil.

81947 to 81973.

From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in October, 1929.

81947. ACTAEA SPICATA L. Ranunculaceae. **Black baneberry.**

No. 1030. Seeds from plants growing in the forest reservation near Nopporo, Hokushu, September 5, 1929. *Ruiyoushoma.* A herbaceous perennial 1 or 2 feet high, with racemes of deep-blue fruits in autumn.

For previous introduction see No. 72405.

81948. CLINTONIA UDENSIS Trautv. and Mey. Convallariaceae.

No. 1029. Seeds from plants growing in the forest reservation near Nopporo, Hokushu, September 5, 1929. *Tsubame o moto.* A low-growing liliaceous perennial from damp places in southeastern Siberia. The erect broadly oblong leaves, 6 inches long, are green, paler beneath. The greenish-yellow flowers, borne on a scape, are not showy, and the fruits are deep blue.

81949. DISPORUM SESSILE (Thunb.) Don. Convallariaceae. **Fairybells.**

No. 1195. Seeds from plants growing in the forest reservation near Nopporo, Hokushu, September 5, 1929. A small herbaceous perennial closely allied to the Uvularias, of the eastern United States. The narrowly ovate leaves are sessile, and the flowers, usually solitary, are white. Native to Japan.

81950. PANAX REPENS Maxim. Araliaceae.

No. 1194. Seeds from plants growing in the forest reservation near Nopporo, Hokushu, September 5, 1929.

For previous introduction and description see No. 81898.

81951. POLYGONATUM JAPONICUM C. Morr. and Decaisne. Convallariaceae.
Solomonseal.

No. 1200. Seeds from plants growing in the forest reservation near Nopporo, Hokushu, September 5, 1929. *Ohoamadoro.* A herbaceous perennial, 1 or 2 feet high, closely related to the Solomonseal of the eastern United States. The oval leaves are 2 to 3 inches long, and the campanulate, greenish-white flowers are about one-fourth of an inch across. Native to Japan.

81952. RIBES sp. Grossulariaceae.

No. 1349. Seeds from plants growing in a field near Odomari, Sakhalin Island, September 12, 1929. Fruits red.

81947 to 81973—Continued.

81953. RUBUS sp. Rosaceae.

No. 1325. Seeds from plants growing along the seashore near Koetoi, Hokushu, September 10, 1929. A low-growing variety producing rather sour, deep-red fruits.

81954. SKIMMIA JAPONICA Thunb. Rutaceae. **Japanese skimmia.**

No. 1199. Seeds from plants growing in the forest reservation near Nopporo, Hokushu, September 5, 1929. *Miyama shi kimi.*

For previous introduction and description see No. 81898.

81955. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

No. 1026. Seeds from plants growing in a field near Maruyama Park, near Sapporo, Hokushu, September 4, 1929. A very early variety with greenish-yellow seeds.

81956 to 81963. TRIFOLIUM spp. Fabaceae. **Clover.**

Seeds.

81956 to 81961. TRIFOLIUM PRATENSE L. **Red clover.**

81956. No. 1021. From the Kotoni Experiment Station, Hokushu, September 3, 1929. Originally obtained by the Kotoni station from Orneshoken, Finland. Apparently a very prolific and early strain.

81957. No. 1022. From the Kotoni Experiment Station, Hokushu, September 3, 1929. Originally obtained by the Kotoni station from Kanhoyski, Finland. Apparently a very early strain.

81958. No. 1023. From the roadside near Nopporo, Hokushu, September 5, 1929.

81959. No. 1024. From the Kotoni Experiment Station, Hokushu, September 3, 1929. Originally obtained from Sweden as Senklover by the Kotoni station.

81960. No. 1025. From the Kotoni Experiment Station, Hokushu, September 3, 1929. Originally obtained from Ekero, Finland, by the Kotoni station.

81961. No. 1318. From the roadside near Koetoi, Hokushu. A variety found abundantly along roadsides and in open fields.

81962. TRIFOLIUM sp.

No. 1028. From the Kotoni Experiment Station, Hokushu, September 3, 1929.

81963. TRIFOLIUM sp.

No. 1329. From moist fields near Odomari, Sakhalin Island, September 12, 1929.

81964. VICIA sp. Fabaceae. **Vetch.**

No. 1360. Near Maruyama Park, near Sapporo, Hokushu, September 15, 1929. A light purple-flowered species growing in abundance and making a very heavy growth.

81965. VICIA sp. Fabaceae. **Vetch.**

No. 1121. Seeds from plants growing in Maruyama Park, near Sapporo, Hokushu, August 19, 1929.

81947 to 81973—Continued.

81966 to 81970. LILIUM spp. Liliaceae. **Lily.**

81966. LILIUM CORDIFOLIUM Thunb. (*L. glehni* F. Schmidt).

No. 1083. Seeds from plants along the road near Taisho Mura, Hokushu, September 22, 1929. A lily, native to Japan, 3 to 4 feet high, with pendulous leaves 12 to 18 inches long and wide, and a raceme of 4 to 10 fragrant white flowers often 6 inches long.

For previous introduction see No. 75677.

81967. LILIUM sp.

No. 1084. Near Obihiro, Hokushu, September 22, 1929.

81968. LILIUM sp.

No. 1085. Near Obihiro, Hokushu, September 22, 1929.

81969. LILIUM sp.

No. 1086. Near Obihiro, Hokushu, September 22, 1929.

81970. LILIUM sp.

No. 1344. Seeds from plants in a field near Odomari, Sakhalin Island, September 12, 1929.

81971. SALIX sp. Salicaceae. **Willow.**

No. 1073. Cuttings from a tree in a yard on the main road near Obihiro, Hokushu, September 21, 1929. This tree measured 76 inches in circumference 3 feet from the ground, and it was between 60 and 70 feet high.

81972. SYRINGA sp. Oleaceae. **Lilac.**

No. 1080. Scions from wild bushes along the roadside near the Plain of Tokachi, at an experiment station near Taisho Mura, Hokushu, September 22, 1929.

81973. SYRINGA sp. Oleaceae. **Lilac.**

No. 1095. Cuttings from a tree 6 to 8 inches in diameter and about 30 feet high, growing in a small park in a suburb of Nokkenshi, Hokushu, September 23, 1929.

81974 to 81981. KNIPHOFIA spp. Liliaceae. **Torchlily.**

From Haarlem, Netherlands. Roots purchased from C. G. van Tubergen. Received December 2, 1929.

81974 to 81977. KNIPHOFIA GRACILIS Harv.

81974. *Jaune Supreme.* A deep-yellow-flowered variety.

81975. *Orange Beauty.* A variety bearing bright-orange flowers on slender spikes.

81976. *Orange Princess.* An orange-flowered variety.

81977. *Sovereign.* A variety bearing canary-yellow flowers.

81978 to 81981. KNIPHOFIA HYBRIDA Hort.

81978. *Ophir.* A variety bearing orange-brown flowers on short spikes.

81979. *Royal Standard.* A variety bearing an abundance of rich golden-yellow flowers. The upper half of the spikes are a rich scarlet.

81974 to 81981—Continued.

81980. *R. Wilson.* A variety with broad spikes.

81981. *Solfatare.* A robust grower bearing broad spikes of yellow flowers shaded with bronze.

81982. SECURIDACA LONGIPEDUNCULATA Fres. Polygalaceae. **Rhodesia violet tree.**

From Salisbury, Southern Rhodesia, Africa. Seeds presented by the Secretary of the Department of Agriculture. Received November 16, 1929.

A much-branched spreading shrub, sometimes 10 feet high, native to Upper Guinea, Ethiopia, and the Mozambique district. The coriaceous leaves are revolute margined when dry, and the flowers, in terminal spreading racemes, are rose, shades of purple or violet, or variegated with white.

For previous introduction see No. 48477.

81983 and 81984. LACHENALIA spp. Liliaceae. **Cape-cowslip.**

From Stellenbosch, Union of South Africa. Seeds purchased from K. C. Stanford. Received December 2, 1929.

81983. LACHENALIA ORCHIOIDES (L.) Ait.

For previous introduction and description see No. 81846.

81984. LACHENALIA PUSTULATA Jacq.

For previous introduction and description see No. 81847.

81985 to 81987. ROSCOEA spp. Zingiberaceae.

From Liverpool, England. Plants purchased from Bees (Ltd.). Received December 5, 1929.

81985 and 81986. ROSCOEA CAUTLEOIDES Gagn.

81985. A perennial herbaceous gingerlike plant, 9 to 12 inches high, native to China. It has thick, fleshy roots, broad leaves, and showy primrose-yellow flowers borne on many-flowered scapes.

For previous introduction see No. 61793.

81986. *August Beauty.* A very vigorous variety which flowers two months later, but is otherwise like the type.

81987. ROSCOEA HUMEANA Balf. and Smith.

A stout gingerlike perennial about 8 inches high, with cigar-shaped rhizomes, four to six broadly lanceolate sessile leaves 4 to 8 inches long, and four to eight large violet-purple flowers in a terminal spike. It is native to Yunnan, southwestern China, and has flowered freely at Kew, England, where it is considered the finest of the genus and where likewise it appears entirely hardy.

For previous introduction see No. 80205.

81988. SOLANUM BULLATUM Vell. Solanaceae.

From Vicosa, Brazil. Seeds presented by P. H. Rolfs, Consultor Technico de Agricultura do Estado de Minas Geraes, Escola Superior de Agricultura e Veterinaria. Received December 3, 1929.

81988—Continued.

According to chemical analysis, the foliage of this plant contains as much nitrogen as alfalfa or possibly a little less. It very frequently grows into a small tree about the size and shape of a small plum tree, but most frequently it is browsed and then continues to sprout up from the crown. It is very drought resistant and is eaten by cattle and mules.

For previous introduction see No. 54676.

81989 to 81994.

From Ottawa, Canada. Cuttings presented by W. T. Macoun, Dominion Horticulturist, Central Experimental Farm, Department of Agriculture. Received March 7, 1929. Numbered in November, 1929.

81989. ROSA RUBROSA Preston. Rosaceae. **Rose.**

Variety *Carmenetta.* A strong-growing hybrid between *R. rubrifolia* and *R. rugosa,* with single, pale-pink flowers which are intermediate in size between those of the parents.

81990 to 81994. SYRINGA PRESTONIAE McKelvey. Oleaceae. **Lilac.**

A race of hybrids between *Syringa reflexa* and *S. villosa,* with large freely produced panicles varying in color from very pale pink to pinkish lilac.

81990. Variety *Bianca.*

81991. Variety *Jacquenetta.*

81992. Variety *Jessica.*

81993. Variety *Julia.*

81994. Variety *Portia.*

81995 and 81996.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture. Received November 26, 1929.

81995. CITRUS MIARAY Wester. Rutaceae.

A handsome ornamental tree suggested as a stock for cultivated citrus fruits. It has slender drooping willowy branches, dark-green leaves, and fruits resembling the lime in appearance and flavor. Native to the Philippine Islands.

For previous introduction see No. 77599.

81996. (Undetermined.)

Tantelak. An asclepiadaceous vine from the lower Sulu Archipelago, with large tender pods eaten as a vegetable.

81997. STIZOLOBIUM SEMPERVIRENS (Hemsl.) Kuntze (*Mucuna sempervirens* Kuntze). Fabaceae. **Velvetbean.**

From Paris, France. Plants purchased from Vilmorin-Andrieux & Co. Received December 17, 1929.

An evergreen climbing shrub with the main trunk sometimes a foot in diameter. It is native to Hupeh, central China. The trifoliolate leathery leaves are 3 to 5 inches long, and the dark chocolate-colored flowers are borne in racemes on the old wood. The woody pods are up to a foot in length.

81998. IPOMOEA MACALUSOI Mattei. Convolvulaceae. **Morning-glory.**

From Italian Somaliland, Africa. Seeds collected by Dr. Mario Calvino, San Remo, Italy. Received December 7, 1929.

A high-climbing tropical woody vine with branches 6 feet or more long. The rounded oval leaves are 5 inches wide, and the handsome bell-shaped light-orange flowers, 2 inches or more long, have red-margined petals and are in nearly sessile cymes. Native to Italian Somaliland.

For previous introduction see No. 80046.

81999. ERICA SCOPARIA L. Ericaceae.

From Newry, Ireland. Seeds purchased from T. Smith, Daisy Hill Nursery. Received December 13, 1929.

An evergreen shrub, native to southern Europe, 10 feet high, with upright branches, small lustrous dark-green linear leaves in whorls of three or four, and long cylindrical spikes of greenish-white flowers.

For previous introduction see No. 79018.

82000 to 82007. GOSSYPIUM spp. Malvaceae. **Cotton.**

From the Galápagos Islands and the Marquesas Islands. Seeds obtained by A. K. Fisher, Bureau of Biological Survey. Received December 4, 1929.

82000. GOSSYPIUM sp.

A. From Albemarle Island, Galápagos Islands, August 22, 1929. Bolls small, three lock or four lock. Lint whitish to buff, tightly adherent to the seed. Seeds completely covered with long, buff-colored fuzz.

82001. GOSSYPIUM sp.

B. From Albemarle Island, Galápagos Islands, August 21, 1929. Leaves entire (?), pubescent above, densely tomentose beneath. Bolls larger and less pointed than in A [No. 82000], three lock. Lint whitish to pale buff, rather coarse, tightly adherent to the seed. Seeds larger than in A, completely covered with fuzz of a pale buff color.

82002. GOSSYPIUM sp.

C. From Vahuka, Marquesas Islands, September, 1929. Bolls very small, abruptly short pointed, three lock or four lock. Lint light reddish brown (some of it lighter in color), rather silky, strongly adherent to the seeds. Seeds small, lacking a well-differentiated fuzz, but partly covered with rather long, strongly adherent, whitish and tawny hairs.

82003 to 82007. From Vahuka, Marquesas Islands, September, 1929. The contents of this package were mixed. The bolls ranged from not larger than in C [No. 82002] to about twice as large. The lint was nearly white for the most part, but some of it had a tawny tinge. After removal of the lint, five different types of seeds were distinguished.

82003. GOSSYPIUM sp.

D–1. Seeds large, coffee colored, longitudinally striate, naked except for a minute tuft of tawny fuzz at the base.

82004. GOSSYPIUM sp.

D–2. Seeds as in D–1 [No. 82003], except that they are smaller and a lighter brown.

82000 to 82007—Continued.

82005. GOSSYPIUM sp.

D–3. Seeds as in D–1 [No. 82003], but a lighter brown and having a larger basal tuft of fuzz.

82006. GOSSYPIUM sp.

D–4. Seeds black, with a small tuft of whitish fuzz at the apex and a small tuft of tawny fuzz at the base.

82007. GOSSYPIUM sp.

D–5. Seeds brown, about half of the surface covered with tawny fuzz, lint less strongly adherent than in C [No. 82002].

82008. QUERCUS PHILLYRAEOIDES A. Gray. Fagaceae. **Oak.**

From Northwood, Middlesex, England. Plants presented by R. C. B. Gardner. Received December 6, 1929.

An evergreen shrub or small tree up to 30 feet high, with broad-elliptic, crenate-serrate leaves 1 to 3 inches long. Native to China and Japan.

82009 to 82020.

From Newry, Ireland. Bulbs purchased from T. Smith. Received December 7, 1929.

82009 to 82018. ALLIUM spp. Liliaceae. **Onion.**

82009. ALLIUM ATROPURPUREUM Waldst. and Kit.

An upright, rather tall onion, sometimes over 3 feet high, with two to four narrow-linear leaves much shorter than the stem. The small, dark-purple flowers, sometimes rosy purple with a darker middle stripe, are in dense hemispherical or spherical clusters. Native to meadows in southeastern Europe.

82010. ALLIUM BEESIANUM W. W. Smith.

An ornamental onion, native to western China, 9 to 18 inches high, with pendulous blue flowers.

For previous introduction see No. 78975.

82011. ALLIUM FLAVUM L.

A wild onion with an upright or ascending stem a foot or less high, narrowly linear leaves about as long as the stem, and small yellow, bell-shaped flowers in a rather dense cluster. Native to dry rocky places, especially in chalky soil, in south-central Europe.

82012. ALLIUM KANSUENSE Regel.

An ornamental blue-flowered onion native to northwestern China.

For previous introduction see No. 76205.

82013. ALLIUM KARATAVIENSE Regel.

An onion, native to Turkestan, with very ornamental broad leaves of a striking blue-green color and dense umbels of dull-pink flowers.

For previous introduction see No. 78983.

82014. ALLIUM MOLY L. **Lily leek.**

A bulbous plant with broad, glaucous leaves and scapes 10 to 15 inches high.

82009 to 82020—Continued.

The bright-yellow flowers are in compact heads. Native to southern Europe.

For previous introduction see No. 69903.

82015. ALLIUM MULTIBULBOSUM Jacq.

An onion from central Europe, closely related to *Allium nigrum*, but differing in the numerous spherical bulblets, its broader and shorter leaves, and in certain floral characters. The flowers, entirely white or with a reddish central stripe in the petals, are in a dense globular cluster. Native to mountain meadows in central Europe.

82016. ALLIUM NARCISSIFLORUM Vill.

An onion, native to Italy, about 9 inches high, with rose-colored flowers in nodding heads.

For previous introduction see No. 76207.

82017. ALLIUM OSTROWSKIANUM Regel.

A particularly striking species native to Turkestan. The deep-rose flowers are produced freely in many-flowered umbels on scapes 12 inches high.

For previous introduction see No. 78987.

82018. ALLIUM TRIQUETRUM L.

A bulbous plant with a 3-angled stem, common on the coast of Algeria. In its usual surroundings this plant is a rather dwarfed weed of dry texture, but it has been found that when it is transplanted to good garden soil with plenty of fresh water it produces, during the winter, large plants with white, tender, and succulent underground parts. If the green leaves are removed the rest of the stem forms a delicate vegetable with no odor of garlic.

For previous introduction see No. 46560.

82019. LEUCOJUM AUTUMNALE L. Amaryllidaceae. **Snowflake.**

An autumn-blooming bulbous plant native to the Mediterranean countries and best suited for growing in sandy soil in the southern half of the United States. The threadlike leaves usually appear after the flowers, which are white, tinged with red, and are borne on a slender scape 3 to 9 inches long.

For previous introduction see No. 64440.

82020. STERNBERGIA MACRANTHA J. Gay. Amaryllidaceae.

A herbaceous perennial with a globose bulb about an inch in diameter and a neck 4 to 6 inches long. The strap-shaped leaves are fully developed in June, and the bright-yellow funnel-shaped flowers are produced in autumn. Native to southwestern Asia.

82021 to 82027.

From Twyford, Berks, England. Plants purchased from John Waterer Son & Crisp. Received December 13, 1929.

82021. CLEMATIS HERACLEAEFOLIA DC. Ranunculaceae. **Tube clematis.**

Ultramarine. A variety of compact habit with an abundance of violet-blue flowers.

82021 to 82027—Continued.

82022 and 82023. CHRYSANTHEMUM MAXIMUM Ramond. Asteraceae. **Pyrenees chrysanthemum.**

82022. *Excelsior.* The very large white flowers are borne on long stiff stems. This is one of the best varieties for cutting.

82023. *Iris Carlile.* A variety bearing pure white flowers with very distinct laciniated petals. It is an especially good variety for cutting.

82024 to 82026. HELENIUM AUTUMNALE L. Asteraceae. **Sneezeweed.**

82024. *Gartensonne.* Brilliant golden-yellow flowers with distinct black centers, borne between August and October.

82025. *Madame Canivet.* Clear lemon-yellow flowers with distinct black centers, borne during July and August.

82026. *Wyndley.* A variety bearing very large reddish bronze and yellow flowers during July and August.

82027. HELENIUM BIGELOVII A. Gray. Asteraceae. **Bigelow sneezeweed.**

Variety *aurantiacum.* A variety bearing large orange-yellow flowers between June and September.

82028 to 82031. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Damghan, Persia. Cuttings collected by W. E. Whitehouse, Bureau of Plant Industry. Received in December 1929.

Scions from some of the best pistache trees in Damghan, Persia. Nuts grown here are said to have a high oil content and to be partly dehisced (split) when grown under conditions which allow normal growth and development of the nuts.

82028. D–57. November 8, 1929. Collected in the same orchard with D–68 and D–82 [Nos. 82029 and 82030].

82029. D–68. November 8, 1929.

82030. D–82. November 8, 1929. Collected from first tree in group of three.

82031. D–82–B. November 8, 1929. A small scion sample collected from a water sprout on this tree, the outside in a group of three.

82032 to 82034.

From Anam, French Indo-China. Seeds presented by M. Poilaue. Received December 10, 1929.

82032. CASTANOPSIS sp. Fagaceae. **Evergreen chinquapin.**

82033. DIOSPYROS sp. Diospyraceae. **Persimmon.**

82034. QUERCUS sp. Fagaceae. **Oak.**

82035 to 82046.

From Leningrad, Russia, Union of Socialistic Soviet Republics. Seeds presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures. Received December 17, 1929.

82035 to 82037. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

82035. From Tashkent. A large-fruited variety.

82035 to 82046—Continued.

82036. No. 109320. From Tashkent. A large-fruited white variety.

82037. No. 109323. From Isfara, Ferghana Province. *Ak Tchilgi.* An early white variety.

82038 to 82046. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

82038. From the valley of the Kaindi Su River.

82039. No. 109674. From Namangan, Mashad, Uzbekistan. *Khashak.*

82040. No. 109677. From Mashad, Uzbekistan. *Isfara Kandak.*

82041. No. 109690. From Tura Kurgan, Uzbekistan. *Ak Uriuk.*

82042. No. 109701. Near Namangan, Mashad, Uzbekistan. *Psta Kandak.*

82043. No. 109707. From Mashad, Uzbekistan. *Supkhani.*

82044. No. 109708. From Mashad, Uzbekistan. *Supkhani III.*

82045. No. 109711. From Namangan, Mashad, Uzbekistan. *Psta Kandak.*

82046. No. 109735. From Namangan, Mashad, Uzbekistan. *Supkhani I.*

82047. PHYLLOSTACHYS sp. Poaceae. **Bamboo.**

From Avery Island, La. Plants presented by E. A. McIlhenny. Received December 20, 1929.

This bamboo, according to a statement of November 19, 1929, from Mr. McIlhenny, is one of two introductions sent to him from Chico, Calif., by the Department of Agriculture, April 3, 1914, under Nos. 23242 and 23243. It is believed by Mr. McIlhenny to be the smooth-sheathed *P. mitis* and has reached a height of 28 feet in poor soil at Avery Island.

82048 to 82051. HELENIUM AUTUMNALE L. Asteraceae. **Sneezeweed.**

From Dedemsvaart, Netherlands. Roots purchased from B. Ruys, Royal Moerheim Nurseries. Received December 10, 1929.

82048. *Gartensonne.* A variety bearing, between the last of August and the last of October, brilliant golden-yellow flowers with velvet-brown centers.

82049. *Autumn Sunshine.* A tall, hardy hybrid bearing pure yellow flowers.

82050. *Grandicephalum Julisonne.* A variety 3 feet high, bearing an abundance of dark-yellow flowers with dark-brown centers.

82051. Variety *pumilum magnificum.* A variety 2½ feet high, bearing a great number of large, yellow flowers from June until autumn.

82052. HEMEROCALLIS sp. Liliaceae. **Daylily.**

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 12, 1929.

No. 1350. From a field near Odomari, Sakhalin Island, September 12, 1929.

82053 to 82058.

From Twyford, Berks, England. Plants purchased from John Waterer Son & Crisp. Received December 13, 1929.

82053 to 82055. CHRYSANTHEMUM MAXIMUM Ramond. Asteraceae. **Pyrenees chrysanthemum.**

82053. *Marion Collier.* A splendid new fringed variety bearing semidouble flowers.

82054. *Mrs. F. Daniels.* A medium-late variety bearing snowy white flowers.

82055. *Phyllis Smith.* A variety bearing an abundance of beautiful lustrous white flowers on long wiry stems. The petals of the flowers are deeply cut, giving the flowers a ruffled appearance.

82056 to 82058. HELENIUM AUTUMNALE L. Asteraceae. **Sneezeweed.**

82056. Variety *pumilum magnificum.* A variety bearing an abundance of yellow flowers between June and September.

82057. *Crimson Beauty.* A greatly improved variety of *cupreum.*

82058. *Julisonne.* Bronzy yellow flowers borne during July and August.

82059 and 82060. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

From Marrakech, Morocco. Seeds presented by H. Brayard, Directeur de la Station d'Essais. Received December 20, 1929.

82059. No. 6054.

82060. No. 6063.

82061 to 82084.

From Chosen and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82061. ACANTHOPANAX SESSILIFLORUM (Rupr. and Maxim.) Seem. Araliaceae.

No. 1552. From the Imperial Botanical Garden, Keijo, October 26, 1929. From shrubs 6 feet or more high, with dense, almost round clusters of black or dark-purple fruits.

For previous introduction see No. 76203.

82062. ACER sp. Aceraceae. **Maple.**

No. 1567. From the Imperial Botanical Garden, Keijo, October 27, 1929. A small cut-leaved maple with bright-red foliage.

82063 and 82064. BERBERIS spp. Berberidaceae. **Barberry.**

82063. BERBERIS sp.

No. 1705. From the Forest Experiment Station, Government General of Chosen, Keijo, November 6, 1929. A deciduous plant 10 feet high, with rather long racemes of fruits.

82064. BERBERIS sp.

No. 1709. Collected along the road between Rensen and Senkoku, No-

82061 to 82084—Continued.

vember 6, 1929. The young shoots color up beautifully, and the rather small red fruits are in good-sized clusters.

82065 and 82066. BETULA JAPONICA Sieb. Betulaceae. **Birch.**

A hardy ornamental tree, native to Japan, up to 75 feet high, with broadly oval leaves. It is closely related to *Betula pendula.*

For previous introduction see No. 75671.

82065. No. 1518. From Suigen, November 2, 1929.

82066. No. 1576. From Suigen, November 2, 1929. From a small tree at the Agricultural Experimental Forest Station.

82067. CASSIA sp. Caesalpiniaceae.

No. 1612. A wild legume growing along the road in a rather mountainous country near Kuroya, October 18, 1929.

82068. CLEMATIS sp. Ranunculaceae.

No. 1566. From the Imperial Botanical Garden, Keijo, October 27, 1929. A wild clematis having a feathery appearance during this season.

82069. CLERODENDRUM FOETIDUM Bunge. Verbenaceae. **Rose glorybower.**

No. 1543. Between the villages of Kagimori and Chichilu, October 18, 1929. Greenish to purple fruits.

82070 and 82071. CORNUS COREANA Wanger. Cornaceae. **Dogwood.**

A tree, native to Chosen, up to 60 feet high, with reddish-brown branchlets, dark-green elliptic leaves 3 to 6 inches long, loose clusters of small white flowers, and black fruits.

For previous introduction see No. 78401.

82070. No. 1550. From the Imperial Garden, Keijo, October 26, 1929.

82071. No. 1633. From the Chosen Imperial Grounds, Keijo, October 26, 1929.

82072. CRATAEGUS SANGUINEA Pall. Malaceae. **Hawthorn.**

No. 1584. From the arboretum of the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929. A native variety with small red fruits. The bright-red globose fruits, one-third inch in diameter, are in rather dense corymbs.

For previous introduction see No. 68414.

82073. CRATAEGUS sp. Malaceae. **Hawthorn.**

No. 1574. A native red hawthorn obtained from the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929. A plant about 12 feet high, with fairly large fruits.

82074. CROTALARIA sp. Fabaceae.

No. 1228. Along the path near Zenkoku, November 7, 1929. Wild plants 10 to 18 inches high.

82075. LESPEDEZA STIPULACEA Maxim. Fabaceae.

82061 to 82084—Continued.

No. 1734. Koka, island of Kokato, November 10, 1929. From a dry exposed situation on the dry mountain back of the village society.

82076. DIOSCOREA sp. Dioscoreaceae. **Yam.**

No. 1570. From a wild species along the road between Chotan and Koryoho, October 30, 1929.

82077. DIOSPYROS LOTUS L. Diospyraceae. **Dateplum.**

No. 1731. Sanseiri, island of Kokato, November 10, 1929. From a tree 55 inches in circumference and 30 or more feet high; it is said to be 100 years or more old.

82078. FAGARA AILANTHOIDES (Sieb. and Zucc.) Engl. Rutaceae.

No. 1554. From the Chosen Hotel grounds, Keijo, October 26, 1929. The leaves are compound, and, judging from the quantity of clusters of small shiny black seeds, this tree flowers freely. The seeds have a pleasant odor when crushed and are quite oily.

82079 and 82080. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

82079. No. 1260. Near Kokato, November 11, 1929. *Soba.*

82080. No. 1700. From the Chosen farmers' market, Keijo, October 31, 1929. *Mei Miru.*

82081. FALCATA JAPONICA Oliver. Fabaceae.

No. 1202. From the woods of the Chosen Government Forest Reservation near Keijo, November 6, 1929. Vines 3 to 4 feet long. They may be of value for green manure.

For previous introduction see No. 65278.

82082. FORSYTHIA sp. Oleaceae.

No. 1628. From the Chosen Imperial Grounds, Keijo, October 26, 1929. A species said to be native to Chosen.

82083. GLEDITSIA HORRIDA (Thunb.) Makino. Caesalpiniaceae. **Japanese honeylocust.**

No. 1622. From the Imperial Botanical Garden, Keijo, October 26, 1929. A large tree, up to 100 feet high, with compressed thorns and purplish branchlets. The pinnately compound leaves are made up of 16 to 20 oblong leaflets 1 to 2 inches long, and the slender racemes of inconspicuous flowers are followed by flat, twisted pods about a foot long. Native to Japan and China.

82084. GOSSYPIUM NANKING Meyen. Malvaceae. **Cotton.**

No. 1710. From the village of Rensen, November 7, 1929. Said to be a native variety. The plants in the small area along the road outside of Rensen, between there and Zenkoku, were not more than about 2 feet high.

82085 to 82101.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82085 to 82101—Continued.

82085 to 82087. HORDEUM VULGARE PALLIDUM Seringe. Poaceae.
Six-rowed barley.

From the Chosen farmers' market, Keijo, October 31, 1929.

82085. No. 1833. *Kannori.* Said to be a spring variety.

82086. No. 1834. *Kannori.* Said to be a spring variety.

82087. No. 1835. *Pori.* Said to be a fall variety.

82088. INDIGOFERA sp. Fabaceae. **Indigo.**

No. 1900. Near Kuroya, October 18, 1929. A species of possible value as a green-manure crop.

82089. JUNIPERUS RIGIDA Sieb. and Zucc. Pinaceae. **Needle juniper.**

No. 1583. From the arboretum of the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929. A graceful pyramidal shrub or small tree up to 30 feet high, native to eastern Asia. The branches are ascending and the branchlets pendulous; the spreading, linear-subulate, sharp-pointed leaves are an inch long; and the globose fruits, a quarter of an inch in diameter, are brownish black, covered with bloom.

For previous introduction see No. 78402.

82090 to 82101. LESPEDEZA spp. Fabaceae.

82090. LESPEDEZA sp.

No. 1227. Along the road near Zurkoku, November 7, 1929. Plants, 12 to 18 inches high, growing on rather poor lava soil.

82091. LESPEDEZA sp.

No. 1581. From the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929.

82092. LESPEDEZA sp.

No. 1631. From the Chosen Imperial Grounds, Keijo, October 26, 1929. A species known as Chosen tree clover which grows between 10 and 16 feet high. Some of the shrubs measured 1 to 2 inches in diameter.

82093. LESPEDEZA sp.

No. 1632. From the Chosen Imperial Grounds, Keijo, October 26, 1929. A fairly erect, branching variety 12 to 20 inches high, bearing an abundance of small, nearly black seeds.

82094. LESPEDEZA sp.

No. 1634. From the Chosen Imperial Grounds, Keijo, October 26, 1929. A species quite frequent in the woods and waste places in the Chosen Imperial Grounds. It resembles very closely sweetclover in growth and habit, and ranges from 4 to 8 feet high. The black, somewhat elongated seeds are very numerous. Most of the stems are still green, and the buds show prominently and are very abundant about the base of the stem. This species looks promising as a forage plant and no doubt would give a good second growth if cut at blooming time.

82085 to 82101—Continued.

82095. LESPEDEZA sp.

No. 1732. From Koka, island of Kokato, November 10, 1929. A small-leaved, rather tall species.

82096. LESPEDEZA sp.

No. 1733. From Koka, island of Kokato, November 10, 1929. A species growing on the dry clayey mountain back of the village.

82097. LESPEDEZA sp.

No. 1832. From plants, 16 to 24 inches high, growing on very poor soil along a dry bank near Koryoho, October 30, 1929.

82098. LESPEDEZA sp.

No. 1879. From plants, 20 to 30 inches high, in dry sandy foothills near Keijo, November 1, 1929.

82099. LESPEDEZA sp.

No. 1893. From much-branched plants, 18 to 28 inches high, growing on a steep dry rocky hillside near Kami Jinsen, November 4, 1929.

82100. LESPEDEZA sp.

No. 1897. From plants, 4 to 5 feet high, in the woods of the Chosen Government Forest Reservation near Keijo, November 6, 1929. The seeds are borne in clusters on the top branches, and the leaves are broader, longer, and larger than most other lespedezas so far gathered.

82101. LESPEDEZA sp.

No. 1898. From plants in the woods of the Chosen Government Forest Reservation near Keijo, November 5, 1929. The plants are 2 to 3 feet high, with small narrow leaves, and the seeds extend all along the branches and main stems.

82102 to 82107.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82102 and 82103. AESCHYNOMENE INDICA L. Fabaceae.

A bushy leguminous annual with pale-green, feathery leaves, native to the Tropics.

For previous introduction see No. 64616.

82102. No. 1241. Plants, 30 to 40 inches high, growing in the woods of the Chosen Government Forest Reservation near Keijo, November 8, 1929. They may be of value as green manure.

82103. No. 1880. Plants, 24 to 30 inches high, growing under moist conditions in a ditch in the foothills near Keijo, November 1, 1929.

82104. MEIBOMIA JAPONICA (Miquel) Kuntze. Fabaceae.

No. 1899. Plants, 30 to 40 inches high, from the woods of the Chosen Government Forest Reservation near Keijo, November 6, 1929. They may have value as green manure.

82105. OPHIOPOGON sp. Liliaceae.
Snakebeard.

82102 to 82107—Continued.

No. 1556. From a hillside in the Imperial Botanical Garden, Keijo, October 26, 1929.

82106 and 82107. PAEONIA SUFFRUTICOSA Andrews (*P. moutan* Sims). Ranunculaceae. **Tree peony.**

82106. No. 1568. From the Imperial Botanical Garden, Keijo, October 27, 1929.

82107. No. 1627. From the Chosen Imperial Grounds, Keijo, October 26, 1929.

82108 to 82152. PHASEOLUS spp. Fabaceae.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82108 to 82133. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

82108. No. 1233. From the Chosen Fair exhibit, Keijo, November 8, 1929; originally grown in the Kokaido Prefecture. Seeds medium sized and maroon colored; used in making confections.

82109. No. 1234. From the Chosen Fair exhibit, Keijo, November 8, 1929; originally grown in the Heian Nando Prefecture. Seeds medium sized and maroon colored; used in making confections.

82110. No. 1240. From plants growing in the woods of the Chosen Government Forest Reservation near Keijo, November 8, 1929. Vines, 5 to 8 feet long, with pods, about 2½ inches long, which shatter very readily. The seeds are very small and black.

82111. No. 1261. Near Kokato, November 11, 1929. *Chokutsu.* A mixed sample of maroon seeds varying in size; used in making confections.

82112. No. 1265. Near Kokato, November 11, 1929. *Chanpatsu.* Seeds medium small and marbled gray and black; used in grinding for cattle feed.

82113 to 82129. From the Chosen farmers' market, Keijo, October 28, 1929.

82113. No. 1678. *Kuzu.* A marbled black and gray variety used, after grinding, for cattle feed.

82114. No. 1679. *Choutsu.* A red variety used in making confections.

82115. No. 1680. *Kuruinpatsu.* A marbled red and black variety used, after grinding, for cattle feed.

82116. No. 1681. *Purugunpatsu.* A red variety used in making confections.

82117. No. 1682. *Chindare.* A marbled gray and black variety used, after grinding, for cattle feed.

82118. No. 1684. *Harugonpachi.* A reddish-brown variety used in making confections.

82119. No. 1685. *Paragonpachi No. 2.* A medium-small, brownish-red variety used for confections.

82108 to 82152—Continued.

82120. No. 1686. *Chaputon.* A mixed sample used, after grinding, for cattle feed.

82121. No. 1687. *Patsu tauri.* A red variety used in making confections.

82122. No. 1688. *Patsu.* A black and red variety used, after grinding, for cattle feed.

82123. No. 1689. *Kunipatsu.* A marbled gray and black variety used, after grinding, for cattle feed.

82124. No. 1690. *Yoganunipatsu.* A black and white variety used, after grinding, for cattle feed.

82125. No. 1691. *Pitanpa.* A marbled black and red variety used, after grinding, for cattle feed, and also for confections.

82126. No. 1692. *Kandopai.* A marbled red and black variety used, after grinding, for cattle feed.

82127. No. 1694. *Kenpipa.* A marbled gray and black variety used, after grinding, for cattle feed.

82128. No. 1695. *Chiyokutsu.* A red variety used in making confections.

82129. No. 1696. *Patsu taure.* A red variety used in making confections.

82130. No. 1831. From plants 18 to 24 inches high, along a dry hillside near Koryoho, October 30, 1929. A prolific variety of good growth.

82131 to 82133. From the Chosen farmers' market, Keijo, October, 1929.

82131. No. 1868. *Kunpun.* A mixed sample used, after grinding, for cattle feed.

82132. No. 1869. *Pachi yappa.* A mixed sample used, after grinding, in making cattle feed.

82133. No. 1870. *Yongonnipa.* A black and white variety used, after grinding, for cattle feed.

82134 to 82145. PHASEOLUS AUREUS Roxb. **Mung bean.**

82134. No. 1235. From the Chosen Fair exhibit, Keijo, November 8, 1929; originally grown in the Heian Hokudo Prefecture. A medium-sized, glossy, olive-green variety used for sprouts.

82135. No. 1236. From the Chosen Fair exhibit, Keijo, November 8, 1929; originally grown in the Kokaido Prefecture. A medium-sized, glossy, light-green variety used for sprouts.

82136. No. 1262. Near Kokato, November 11, 1929. *Rokuto.* A very small olive-green variety used for sprouts.

82137. No. 1263. Near Kokato, November 11, 1929. *Rokuto.* A medium-sized, olive-green variety used for sprouts.

82138 to 82145. From the Chosen farmers' market, Keijo, October 28, 1929.

82138. No. 1683. *Rokuto.* A variety used for sprouts and bean vermicelli.

82108 to 82152—Continued.

82139. No. 1801. *Rokuto.* A green variety used for sprouts and bean vermicelli.

82140. No. 1802. *Rokuto.* A green variety used for sprouts and bean vermicelli.

82141. No. 1803. *Rokuto.* A green variety used for sprouts and bean vermicelli.

82142. No. 1804. *Rotsu.* A green variety used for sprouts and bean vermicelli.

82143. No. 1805. *Tonoran notsuku.* A golden variety used for sprouts.

82144. No. 1806. *Rokutsu.* A variety used for sprouts and bean vermicelli.

82145. No. 1838. *Rokuto.* A variety used for sprouts and bean vermicelli.

82146 to 82150. PHASEOLUS CALCARATUS Roxb. Fabaceae. **Rice bean.**

82146. No. 1210. From plants in the Chosen Government Forest Reservation near Keijo, November 6, 1929. Vines 4 to 6 feet long.

82147. No. 1239. From plants in the woods of the Chosen Government Forest Reservation near Keijo, November 8, 1929. Vines with pods 2½ to 3½ inches long, and small, brown seeds which shatter easily.

82148. No. 1699. From the Chosen farmers' market, Keijo, October 31, 1929. *Ipatsu.* A mixed sample of maroon and greenish-yellow seeds used for cattle feed, and also for cattle medicine for fever.

82149. No. 1839. From the Chosen farmers' market, Keijo, October 31, 1929. *Ipa.* A maroon variety said to be used for cattle feed and especially as a medicine for fever.

82150. No. 1878. From the Chosen farmers' market, Keijo, October 31, 1929. *Ipa.* A greenish-yellow variety used for cattle feed.

82151 and 82152. PHASEOLUS VULGARIS L. **Common bean.**

From the Chosen Fair exhibit, Keijo, November 8, 1929.

82151. No. 1231. Originally grown in the Kankyo Hokudo Prefecture. The medium-small white seeds are like the small pea bean and are used for food.

82152. No. 1232. Originally grown in the Zendra Nando Prefecture. A variety with medium-sized, kidney-shaped seeds which are mottled red and white; used for food.

82153. PHYLLOSTACHYS PUBERULA (Miquel) Munro. Poaceae. **Bamboo.**

From Avery Island, La. Plants presented by E. A. McIlhenny. Received December 21, 1929.

A large bamboo which grows to a height of 50 feet or more, with culm diameters up to 4 inches. The leaves are rather small, 2 to 5 inches long, and two or three on a branchlet. The new culms appear in the spring slightly later than those of *Phyllostachys edulis* and earlier than those of

82153—Continued.

P. bambusoides. The fresh culm sheath is plain mauve colored, puberulent above, glaucous all over, and very handsome with its small terminal wavy pseudophyll of bright green. These plants are from some which were previously sent to Mr. McIlhenny under No. 24761.

82154 to 82160.

From Chosen. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in December, 1929.

82154 and 82155. PISUM SATIVUM L. Fabaceae. **Pea.**

Seeds obtained at the Chosen Fair exhibit, Keijo, November 8, 1929.

82154. No. 1237. Originally grown in the Zendra Nando Prefecture. A medium-sized, nearly round, smooth variety used for food.

82155. No. 1238. Originally grown in the Kankyo Hokudo Prefecture. A medium-sized, light-green, wrinkled variety used for food.

82156. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. 1765. Near the village of Ryugakeku, northwest of Heijo, November 17, 1929. Scions cut from a small tree growing in the wild. The branches are a beautiful bright red.

82157. PUERARIA THUNBERGIANA (Sieb. and Zucc.) Benth. Fabaceae. **Kudzu.**

No. 1204. Seeds from plants along the road between Chotan and Koryoho, October 30, 1929. A kudzu which may prove to be a hardier form than the one grown in the United States.

For previous introduction see No. 47579.

82158 and 82159. PYRUS FAURIEI C. Schneid. Malaceae. **Pear.**

For previous introduction see No. 47155.

82158. No. 1578. From Suigen, November 2, 1929. Seeds from a very thorny tree about 8 feet high, with fruits up to the size of a Concord grape, and russet with numerous brown spots. It is said to be a native variety.

82159. No. 1593. From the Forest Experiment Station of the Government General of Chosen, Keijo, November 6, 1929. Seeds from a thorny tree 10 to 12 feet high.

82160. RHAMNUS sp. Rhamnaceae. **Buckthorn.**

No. 1572. Seeds from small spiny shrubs in a river bottom near the Keijo seed and nursery farm outside the East Gate, Keijo, November 1, 1929.

82161 to 82175. RHODODENDRON spp. Ericaceae. **Azalea.**

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82161 and 82162. RHODODENDRON DAURICUM MUCRONULATUM (Turcz.) Maxim. **Korean rhododendron.**

82161 to 82175—Continued.

An upright shrub, up to 6 feet high, with rose-colored flowers which appear very early in the spring. The leaves turn a beautiful scarlet in the autumn.

For previous introduction see No. 71126.

82161. No. 1589. From the Forestry Experiment Station of the Government General of Chosen, Keijo, November 6, 1929.

82162. No. 1739. From the mountain side adjacent to the boat landing at Kokan, island of Kokato, November 11, 1929.

82163 and 82164. RHODODENDRON SCHLIPPENBACHII Maxim. **Royal azalea.**

A beautiful deciduous shrub 15 feet high, with large clear pink flowers appearing before the leaves in the spring. The broadly obovate leaves, 2 to 4 inches long, are dark green above, paler beneath, and change to yellow, orange, and crimson in the autumn. Native to Manchuria, Chosen, and Japan.

For previous introduction see No. 78411.

82163. No. 1558. An azalea collected in the wild in the Botanical Garden, Keijo, October 27, 1929.

82164. No. 1590. An azalea from the Forestry Experiment Station of the Government General of Chosen, Keijo, November 6, 1929. It was found growing wild on the decomposed granite hillside.

82165. RHODODENDRON sp.

No. 1557. From small-leaved plants growing wild in the Imperial Botanical Garden, Keijo, October 27, 1929.

82166. RHODODENDRON sp.

No. 1587. A rhododendron, native to Chosen, from the Forestry Experiment Station, Keijo, November 6, 1929.

82167. RHODODENDRON sp.

No. 1588. From the Forestry Experiment Station of the Government General of Chosen, Keijo, November 6, 1929. An azalea, native to Chosen, about 2 feet high, found in decomposed granite soil in exposed dry situations.

82168. RHODODENDRON sp.

No. 1591. From plants in the wild at the Forestry Experiment Station of the Government General of Chosen, Keijo. A native variety with small leaves and lavender-pink flowers.

82169. RHODODENDRON sp.

No. 1620. From the Imperial Botanic Garden, Keijo, October 26, 1929.

82170. RHODODENDRON sp.

No. 1624. From the Chosen Imperial Grounds, Keijo, October 26, 1929.

82171. RHODODENDRON sp.

No. 1625. From the Chosen Imperial Grounds, Keijo, October 26, 1929.

82172. RHODODENDRON sp.

No. 1637. From the woods of the Chosen Imperial Grounds, Keijo, October 27, 1929. Said to be native to Chosen.

82161 to 82175—Continued.

82173. RHODODENDRON sp.

No. 1638. From the woods of the Chosen Imperial Grounds, Keijo, October 27, 1929. Said to be native to Chosen.

82174. RHODODENDRON sp.

No. 1722. From Funai or Koka village, island of Kokato, November 10, 1929.

82175. RHODODENDRON sp.

No. 1723. From the village of Kanchori, island of Kokato, November 10, 1929.

82176 to 82181.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82176 and 82177. RIBES FASCICULATUM Sieb. and Zucc. Grossulariaceae. **Winterberry currant.**

82176. No. 1580. From the arboretum of the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929. An interesting native variety.

82177. No. 1714. Collected on the mountain side south of the village of Rensen, November 7, 1929.

82178 to 82180. ROSA spp. Rosaceae. **Rose.**

82178. ROSA sp.

No. 1582. From the arboretum of the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929, and said to have originally come from Siberia. A small plant with very small shiny green leaves and black hips.

82179. ROSA sp.

No. 1594. A native Chosen species from the Forestry Experiment Station of the Government General of Chosen, Keijo, November 6, 1929.

82180. ROSA sp.

No. 1598. From the Forestry Experiment Station of the Government General of Chosen, Keijo, November 6, 1929. A strong-growing species with rather long, pointed, bright-red hips.

82181. RUBUS sp. Rosaceae. **Raspberry.**

No. 1592. From the Forestry Experiment Station of the Government General of Chosen, Keijo, November 11, 1929. Trailing vines with rather small leaves.

82182 to 82330. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Chosen and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82182. No. 1203. Obtained in the woods of the Chosen Government Forest Reservation near Keijo, November 6, 1929. Slender vines, 4 to 7 feet long, with small pods which shatter easily.

82183. No. 1206. Obtained near the East Gate, Keijo, November 6, 1929. *Chonte.* A variety bearing medium-sized, yellowish-green to green seeds with a brown hilum. The seeds are used as boiled beans with other foods.

82182 to 82330—Continued.

82184. No. 1207. Obtained near the East Gate, Keijo, November 5, 1929. *Pepute.* A variety bearing medium-sized yellow seeds having a pale-brown to dark-brown hilum, used as boiled beans and for cattle feed.

82185. No. 1208. Obtained near the East Gate, Keijo, November 6, 1929. *Kirugumutu.* A variety having medium-sized yellow seeds with a light-brown hilum, used for making bean curd, miso, and soy sauce.

82186 to 82195. Obtained in the village of Rensen, November 7, 1929.

82186. No. 1211. From the grain market. *Rensen.* Medium-sized yellow seeds with a light-brown hilum; used for making bean curd, miso, and soy sauce.

82187. No. 1212. Obtained in the grain market. *Rensen.* Medium-sized yellow seeds mottled with brown, and having a light-brown hilum; used as boiled beans with other foods and also boiled for cattle feed.

82188. No. 1213. From the grain market. *Rensen.* Medium-sized, yellow seeds with the hilum varying from pale brown to dark brown; used in making bean curd, miso, and soy sauce.

82189. No. 1214. From the grain market. *Rensen.* Medium-sized, yellow seeds with the hilum varying from pale brown to a russet brown; used in making bean curd, miso, and soy sauce.

82190. No. 1215. A large black-seeded variety, used as boiled beans and in making confections.

82191. No. 1216. Medium-sized yellow seeds with a light-brown hilum; used as boiled beans and also boiled for cattle feed.

82192. No. 1217. A slender variety 3 to 4 feet high, with medium-sized seeds having a brown hilum; used as boiled beans and also boiled for cattle feed.

82193. No. 1218. Medium-sized yellow seeds with a brown hilum; used as boiled beans and also boiled for cattle feed.

82194. No. 1219. Medium-small greenish-yellow seeds with a brown hilum; used as boiled beans.

82195. No. 1220. Medium-sized yellow seeds with a brown hilum; used as boiled beans.

82196 to 82201. Near Zenkoku, November 7, 1929.

82196. No. 1221. *Pura Page.* A variety with very large pods, 2½ to 3½ inches long, containing large, much flattened, black and greenish-yellow seeds; used as a green vegetable and as boiled beans.

82197. No. 1222. *Kirugunte.* A variety 30 to 36 inches high, bearing very small yellow seeds with a russet-brown hilum; used for sprouts and as boiled beans with other foods.

82198. No. 1223. *Komijankon.* Large black seeds with the seed coat more or less split; used as boiled beans.

82182 to 82330—Continued.

82199. No. 1224. *Pankon.* Large yellow seeds with seed coat split to a very considerable extent; used as boiled beans and also boiled for cattle feed.

82200. No. 1225. *Pura Page.* Medium-large yellowish-brown seeds; used as a green vegetable and also as boiled beans.

82201. No. 1226. Medium-sized greenish-yellow seeds used as boiled beans and also boiled for cattle feed.

82202. No. 1229. From the Chosen Fair soybean exhibit, Keijo, November 8, 1929; originally grown in Kogendo Prefecture. Large, nearly round, yellow seeds with a light-brown hilum; used in making bean curd, soy sauce, and miso.

82203. No. 1230. From the Chosen Fair soybean exhibit, Keijo, November 8, 1929; originally grown in Keikido Prefecture. Seeds medium sized, nearly round, with a pale hilum; used in making bean curd, miso, and soy sauce.

82204 to 82216. Obtained near Kokato, November 11, 1929.

82204. No. 1242. *Hinkurukon.* Medium-sized, slightly greenish-yellow seeds with a slate-brown hilum.

82205. No. 1243. *Komjankon.* Medium-sized, black, slightly flattened seeds used as boiled beans and in making confections.

82206. No. 1244. *Hinkon.* Medium to medium-large seeds usually with a pale hilum, but sometimes having a brown hilum; used as boiled beans and also boiled for cattle feed.

82207. No. 1245. *Kirumukon.* A variety with very small, nearly round, yellow seeds with a light-brown hilum; used for sprouts.

82208. No. 1246. A variety with very small, nearly round, black seeds which are of the Kingston type [No. 17255], but the hilum is yellow. The variety may be of value for sprouts.

82209. No. 1247. *Hinkon.* Glossy yellow seeds with a brown hilum; used as boiled beans and also boiled for cattle feed.

82210. No. 1248. Seeds medium sized and marbled with brown and yellow, and having a brown hilum; the seed coat is glossy.

82211. No. 1249. *Komujankon.* Seeds mixed blacks, very similar to those of the old Wilson variety [No. 19183].

82212. No. 1250. Mixed sample of medium to medium-large seeds varying from greenish yellow to yellow; used as boiled beans for cattle feed.

82213. No. 1251. *Nuyupuru.* Medium-sized greenish-yellow seeds with a bluish tinge; used as boiled beans.

82214. No. 1252. *Funkon.* Mixed sample of yellow seeds varying in size and shape and in the color of the hilum. The seeds are more or less mottled with brown.

82215. No. 1253. *Komjonkon.* Mixture of black seeds varying in size and shape, but all more or less flattened.

82182 to 82330—Continued.

82216. No. 1254. *Keryian.* Medium-sized yellow seeds varying somewhat in the color of the hilum.

82217. No. 1255. From Sosha, near Jinsen, November 11, 1929. *Komujankon.* Medium-sized black, somewhat flattened seeds; used as boiled beans.

82218. No. 1256. From Sosha, near Jinsen, November 11, 1929. *Funkon.* Medium-sized yellow seeds, more or less mottled with brown, with a light-brown to brown hilum; used as boiled beans and also boiled for cattle feed.

82219. No. 1257. Near Kokato, November 11, 1929. *Burukon.* Medium-large brown seeds used as boiled beans.

82220. No. 1258. Near Kokato, November 11, 1929. A selection from Burukon. Seeds medium large and buff colored.

82221. No. 1266. Near Kokato, November 11, 1929. *Chonteprunkorp.* A mixed variety, undoubtedly heterozygous, with yellow to yellowish green, medium to medium-large seeds; used as boiled beans and also boiled for cattle feed.

82222. No. 1604. From the Asami bean curd or tofu shop, Kagemori, October 18, 1929. Medium-seized yellow seeds grown in this region and used in the manufacture of bean curd.

82223. No. 1605. From the Asami bean curd or tofu shop, Kagemori, October 18, 1929. *Sapporo.* A medium-sized, round, yellow-seeded variety grown in this region and used in the manufacture of bean curd.

82224 to 82228. From a farmer's field near Kagemori, October 18, 1929.

82224. No. 1606. A medium-sized yellow-seeded variety, said to be native to Manchuria; used in the manufacture of bean curd.

82225. No. 1607. A medium-sized, round, yellow-seeded variety with a pale hilum, said to be native to Manchuria; grown extensively for the seeds, which are used in the manufacture of bean curd.

82226. No. 1608. A medium-large, nearly round, yellow-seeded variety with a brown hilum, said to be native to Manchuria; grown in this region for the seeds, which are used in the manufacture of bean curd.

82227. No. 1609. A medium-sized yellow-seeded variety with a light-brown hilum, said to be native to Manchuria; grown largely in this section for the seeds, which are used in the manufacture of bean curd.

82228. No. 1610. A medium-large, greenish-yellow seeded variety with a gray pubescence; said to be native to Manchuria; used for bean curd.

82229 to 82267. Obtained in the Chosen farmers' market, Keijo, October 28, 1929.

82229. No. 1640. *Pimajo.* A variety bearing black-and-white seeds with the seed coat split in fine network; said to be used in making confections.

82230. No. 1641. *Kamunjon.* A medium-sized, slightly flattened, black-seeded variety, said to be native to Chosen; used for making confections.

82182 to 82330—Continued.

82231. No. 1642. *Purukon.* A brown medium-sized, nearly round-seeded variety, said to be native to Chosen; used in making confections.

82232. No. 1643. *Ute.* A very small, light-yellow, round-seeded variety, said to be native to Chosen and to be used for sprouting.

82233. No. 1644. *Mennun.* A variety bearing medium-large, slightly flattened, black-and-brown seeds with the black in concentric rings like the Meyer variety [No. 17852]. It is said to be used in making confections.

82234. No. 1645. *Parakon.* A medium-large green-seeded variety, said to be native to Chosen.

82235. No. 1646. *Taichukon.* A medium-sized, nearly round, brown-seeded variety, said to be native to Chosen.

82236. No. 1647. *Purukon.* A medium-large, slightly flattened, green-seeded variety, said to be native to Chosen.

82237. No. 1648. *Hinkon No. 2.* A yellow-seeded variety which appears to have variations in the size of the seeds and in the color of the hilum; said to be native to Chosen.

82238. No. 1649. *Hinkon No. 1.* A medium-sized yellow-seeded variety with a pale hilum; said to be native to Chosen.

82239. No. 1650. *Konchonkon.* A medium-large, nearly round, black-seeded variety, said to be native to Chosen.

82240. No. 1651. *Kurugunbunko.* Large, nearly round, yellow seeds slightly mottled with brown and having a pale hilum; said to be native to Chosen. The seeds are of the Dixie type.

82241. No. 1652. *Chonte.* A medium-large, nearly round, green-seeded variety, said to be native to Chosen.

82242. No. 1653. *Funkoe.* A medium-sized yellow-seeded variety, more or less mixed; said to be native to Chosen.

82243. No. 1654. *Menunikon.* A variety with medium-sized, slightly flattened, black-and-brown seeds, the black arranged in concentric rings like the Meyer variety [No. 17852]. It is said to be native to Chosen.

82244. No. 1655. *Kirugunte.* Medium-small green-and-yellow mixed varieties, said to be native to Chosen.

82245. No. 1656. *Kirugomu.* A very small yellow round-seeded variety, excellent for sprouts and used in Chosen for this purpose. It is said to be native to Chosen.

82246. No. 1657. *Funkonja.* A medium-sized, nearly round, yellow-seeded variety, more or less mixed. It is said to be native to Chosen.

82247. No. 1658. *Hinkon Kamujankon.* A medium-large, slightly flattened variety which is not a pure sort, as the seeds vary from black and brown

82182 to 82330—Continued.

to black. It is said to be native to Chosen and is used for confections.

82248. No. 1659. *Kamujan.* A medium-large, slightly flattened, black-seeded variety, said to be native to Chosen.

82249. No. 1660. *Hinkon.* A medium-large, nearly round, yellow-seeded variety, said to be native to Chosen.

82250. No. 1661. *Purunkon.* A medium-sized, slightly flattened, deep-green seeded variety said to be native to Chosen.

82251. No. 1662. *Hinkonyon.* A variety bearing medium-large, yellow seeds with a pale hilum, said to be native to Chosen. The seeds are of the Dixie type.

82252. No. 1663. *Funron.* A variety bearing medium-large, nearly round, deep-green seeds, said to be native to Chosen.

82253. No. 1664. *Komujonkon.* A variety bearing medium-large, nearly round, black seeds which are used in making confections. It is said to be native to Chosen.

82254. No. 1665. *Kirukun.* A very small, nearly round, yellow-seeded variety with a pale hilum. It is said to be native to Chosen and to be used for sprouting.

82255. No. 1666. *Kamujankon.* A variety bearing medium-large, more or less flattened black seeds, said to be native to Chosen and used in making confections.

82256. No. 1667. *Kirunte.* A variety bearing medium-small, round, yellow to olive-yellow seeds, said to be native to Chosen and used for sprouting.

82257. No. 1668. *Fukute.* A variety bearing medium-large, slightly flattened, black seeds. It is said to be native to Chosen and to be used for making confections.

82258. No. 1669. *Kirute.* A variety bearing medium-small, nearly round, yellow seeds with a pale hilum. It is said to be native to Chosen and to be used for sprouting. It appears to be an excellent bean for this purpose.

82259. No. 1670. *Chonte.* A medium-sized greenish-yellow variety with a pale hilum, said to be used as boiled beans and also boiled as cattle feed.

82260. No. 1671. *Chonte.* A medium-large, green, nearly round variety, used for boiling with other foods.

82261. No. 1672. *Chonte.* A medium-sized green variety with a light-brown hilum; used for boiled beans and also boiled as cattle feed.

82262. No. 1673. *Pepute.* A medium-large yellow variety with variations as to the color of the hilum; used in making bean curd, miso, and soy sauce.

82263. No. 1674. *Pepute No. 2.* A medium-sized, yellow, more or less mixed variety, used for making bean curd, miso, and soy sauce.

82182 to 82330—Continued.

82264. No. 1675. *Kwan Jo.* A very small, nearly round, yellow variety, used for sprouts and also cooked as cattle feed.

82265. No. 1676. *Ko Ko Te.* A very small black-seeded variety, nearly round, very similar in size and shape to the Kingston [No. 17255]. It is used for boiling.

82266. No. 1677. *Shin Fun.* A medium-sized green variety, used for boiling with other foods.

82267. No. 1693. *Hinkon.* A medium-large yellow-seeded variety, used in making bean curd, miso, and soy sauce, and also boiled as cattle feed.

82268 to 82281. Near Koryoho, October, 1929.

82268. No. 1814. *Bam Pan Kon.* A variety bearing medium-sized green seeds with a deep-brown hilum; used for food purposes.

82269. No. 1815. *Bam Mi Kon.* A medium-large brown variety with a split seed coat; used as boiled beans with other foods.

82270. No. 1816. *Chotan.* Medium-sized yellow seeds with variations in the color of the hilum; used for bean curd, miso, and soy sauce.

82271. No. 1817. A variety said to be wild; it is undoubtedly an escaped cultivated variety that volunteers freely. The seeds are olive green, medium sized, and much flattened, and are easily shattered.

82272. No. 1818. *Chotan.* A variety classed as an excellent grade. The seeds are medium sized, yellow, and have a pale hilum; used extensively because of their quality for bean curd.

82273. No. 1819. *Bam Pan Kon.* Medium-large buff-colored seeds with the seed coat more or less split; used as boiled beans and also cooked as cattle feed.

82274. No. 1820. *Chotan.* A medium-sized yellow variety more or less mixed as to the color of the hilum; used for bean curd, miso, and soy sauce.

82275. No. 1821. A mixture of brown, yellow, and black beans, used as boiled beans with other foods.

82276. No. 1822. *Oriaru Kon.* Seeds mixed, but mostly of a bluish-green color; used for cooking.

82277. No. 1823. Medium-sized black, slightly flattened seeds, used as boiled beans with other foods.

82278. No. 1824. A variety said to be wild, but it appears much like Sooty [No. 16790–A]. The plants are erect, not viny, quite branching, and the seeds are easily shattered. The seeds are medium small, much flattened, and a sooty black.

82279. No. 1825. Mixed sample of black and yellow beans used as boiled beans.

82280. No. 1826. Seeds medium large, black; used for boiled beans and in making confections.

82281. No. 1827. A mixture of yellow seeds, used for making miso, bean curd, and soy sauce.

82182 to 82330—Continued.

82282. No. 1828. Obtained at the railway station, Chotan, October 30, 1929. *Chotan.* Medium-sized yellow seeds with a pale hilum; used for making bean curd, miso, and soy sauce.

82283. No. 1829. From a farmer's field near Koryoho, October 30, 1929. A large, yellow-seeded, somewhat flattened variety; used for boiling with other foods.

82284. No. 1830. A sample of the improved Chotan variety, obtained from the Director of the Soybean Improvement Society in the Yunai section, Chotan, October 30, 1929. A medium-sized yellow variety with a pale hilum. Because of its high protein content it is especially valuable for making soybean curd, and is exported to the main island largely for this purpose.

82285 to 82316. Obtained in the Chosen farmers' market at Keijo, October, 1929.

82285. No. 1840. *Somo Kute.* A very small, nearly round, black variety, very similar to Kingston [No. 17255], but with a yellow germ; used for boiling and also boiled as cattle feed.

82286. No. 1841. *Kon Chote.* A very small, nearly round, yellow-seeded variety, more or less mixed, used for sprouts and also boiled as cattle feed.

82287. No. 1842. *Kon Pute.* A mixed sample of black varieties ranging from medium small to medium large; used as boiled beans with other foods.

82288. No. 1843. *Paru Kon Hon.* Medium-sized brown seeds, used as boiled beans with other foods.

82289. No. 1844. *Kon Pute.* Medium-large black seeds with the seed coat having a tendency to split; used as food.

82290. No. 1845. *Kon Chotan.* Medium to medium-large yellow beans, more or less mixed; used for tofu, miso, and soy sauce.

82291. No. 1846. *Kon Sui Yen.* Seeds very small, yellow, nearly round; used for sprouting and also for cooking.

82292. No. 1847. *Kon Chonge.* Seeds green with a light-brown hilum.

82293. No. 1848. *Purute.* Seeds medium sized, brown; used as boiled beans.

82294. No. 1849. *Kon Chotan.* Medium-sized yellow seeds, grown in the Chotan section; said to be excellent for making bean curd.

82295. No. 1850. *Maru Kon Chotan.* Seeds medium sized, yellow, but mixed as to the color of the hilum; originally from the Chotan district; used for making bean curd, miso, and soy sauce.

82296. No. 1851. *Kon Kongenoto.* Seeds medium-large, yellow, mixed as to color of hilum; used for bean curd, miso, and soy sauce.

82297. No. 1852. *Oiaru.* Medium-large black-and-brown seeds with the colors arranged in concentric bands like the Meyer [No. 17852]; used as boiled beans and in making confections.

82298. No. 1853. *Kon Jon Kon.* A medium-sized black variety, used for boiling with other foods and also in making confections.

82299. No. 1854. *Kon Kiru Muten.* A small, yellow to greenish, nearly round variety, used for sprouting and also cooked for cattle feed.

82300. No. 1855. *Kon Papute.* Mixed sample of yellow-seeded varieties.

82301. No. 1856. *Kiru Gunte.* Medium-small, nearly round, yellow seeds with a slate-brown hilum; used for sprouting and as boiled beans.

82302. No. 1857. *Kiru Gunte.* Very small, nearly round, yellow variety, somewhat mixed; used for sprouting and boiled as cattle feed.

82303. No. 1858. *Hon Kon.* Medium-large yellow seeds with a pale hilum; used for bean curd, miso, and soy sauce.

82304. No. 1859. *Fin Kona Pute.* A medium-sized, yellow, more or less mixed variety; used for bean curd and also boiled as cattle feed.

82305. No. 1860. *Kon Jon Kon.* A medium-large black variety, used for boiling and also for making confections.

82306. No. 1861. *Kirun Kon.* A very small, nearly round, yellow, more or less mixed variety, used for sprouting and also boiled as cattle feed.

82307. No. 1862. *Hon Kon.* A medium-sized yellow variety with a pale hilum; used for making bean curd, miso, and soy sauce. It is very similar to Chotan.

82308. No. 1863. *Kon Chonte.* A medium-sized greenish-yellow variety, very similar to Tokyo [No. 17264]. Used as boiled beans and also cooked as cattle feed.

82309. No. 1864. *Hon Kon.* A medium-sized yellow-seeded variety with a russet-brown hilum; used for bean curd and miso and also boiled for cattle feed.

82310. No. 1865. *Kon Jon Kon.* A large black-seeded variety, used for boiling with other foods and also in making confections.

82311. No. 1866. *Kon Papute.* Seeds medium sized, yellow, with variations in the color of the hilum; used for cattle feed when boiled.

82312. No. 1867. *Kitu Gunte.* A very small, nearly round, yellow-seeded variety, used for sprouts and also boiled for cattle feed.

82313. No. 1871. *Kon Chon.* A medium-small green variety with a light-brown hilum; used for cooking with other foods.

82314. No. 1872. A medium-sized yellow sample, but mixed as to varieties; used for bean curd, miso, and soy sauce, and also boiled for cattle feed.

82182 to 82330—Continued.

82315. No. 1873. Medium-sized, yellow seeds, more or less mottled with brown, with many variations as to color of hilum; used for miso and also cooked for cattle feed.

82316. No. 1874. A medium-large, black, slightly flattened variety, used as boiled beans and also for making confections.

82317. No. 1876. Obtained in Suigen, November 2, 1929. *Kom Jon Kon.* Black seeds of evidently several varieties varying from medium small to medium; used for boiled beans with other foods.

82318. No. 1877. Obtained in Suigen, November 2, 1929. *Fun Kon.* Seeds yellow, but of several varieties; used in making miso and also cooked for cattle feed.

82319 to 82325. Obtained in Kami Jinsen, November 4, 1929.

82319. No. 1881. *Hinkon.* A very small, nearly round, yellow-seeded variety with a light-brown hilum; used for making sprouts.

82320. No. 1882. *Fu Yon Kon.* Medium-small green seeds with a white hilum; used for sprouts and boiled beans.

82321. No. 1883. *Fun Ban Kon.* Mixed sample with large percentage of bluish black on yellow; used as a cattle feed when cooked.

82322. No. 1884. *Kiru Gunte.* A small yellow-seeded variety with a pale hilum; used for sprouts.

82323. No. 1885. *Pa Ran Kon.* Medium-small greenish-yellow seeds with a light-brown hilum; used for sprouts and as boiled beans.

82324. No. 1886. *Komu Jon Kon.* Medium-large black seeds, used as boiled beans and in making confections.

82325. No. 1887. *Hon Jon Kon.* Mixed sample of yellow-seeded varieties, used as boiled beans and also boiled for cattle feed.

82326 to 82330. Obtained in Jinsen, November 4, 1929.

82326. No. 1888. *Chotan.* A medium-sized, nearly round, glossy yellow variety with a pale hilum. It is extensively grown and considered one of the best varieties for making bean curd, and is also used for making miso and soy sauce.

82327. No. 1889. *Chotan.* Seeds medium sized, yellow with a pale hilum; used for bean curd, miso, and soy sauce.

82328. No. 1890. *Rensen.* Medium-sized, glossy yellow seeds with a pale hilum and a light mixture of yellow seeds with a light-brown hilum; used for bean curd, miso, and soybean sauce.

82329. No. 1891. *Rensen.* Seeds medium-sized, glossy yellow, with a considerable proportion having a light-brown hilum; used for bean curd, miso, and soy sauce.

82330. No. 1892. Seeds of a medium-sized yellow variety with a russet-brown hilum; said to be an excellent oil variety.

82331 to 82341.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82331. SOPHORA sp. Fabaceae.

No. 1201. Plants, 3 to 4 feet high, growing in the woods of the Chosen Government Forest Reservation near Keijo, November 6, 1929. Of possible value as a green manure.

82332 and 82333. SORBUS ALNIFOLIA (Sieb. and Zucc.) Koch (*Pyrus alnifolia* Franch.). Malaceae. **Mountain-ash.**

An upright tree with a dense round head, attractive bright-green foliage, and clusters of small red and yellow fruits. Native to eastern Asia.

For previous introduction see No. 77844.

82332. No. 1551. From trees, 20 feet or more high, growing in the Imperial Botanical Garden, Keijo, October 26, 1929.

82333. No. 1564. From Keijo, October 28, 1929.

82334 to 82340. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

82334. No. 1264. Near Kokato, November 11, 1929. *Susa.* A variety used as a food.

82335. No. 1708. From an upland valley with apparently rather adverse conditions, between Rensen and Zenkoku, November 7, 1929.

82336 to 82340. From the Chosen farmers' market, Keijo, October 31, 1929. *Susu.*

82336. No. 1807.

82337. No. 1808.

82338. No. 1809.

82339. No. 1810.

82340. No. 1811.

82341. SPIRAEA SALICIFOLIA L. Rosaceae. **Willowleaf spirea.**

No. 1579. From the forestry branch of the Agricultural Experiment Station, Suigen, November 2, 1929.

82342 to 82358.

From Chosen and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82342. SYRINGA sp. Oleaceae. **Lilac.**

No. 1595. From the Forestry Experiment Station of the Government of Chosen, Keijo, November 6, 1929. Said to be the best white variety; native to Chosen.

82343 to 82345. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

82343. No. 1617. From the Chosen Imperial Tree Peony Gardens, Keijo, October 26, 1929. Plants about 3 feet long with numerous long stems and quite an abundance of flower heads.

82344. No. 1618. From the Chosen Imperial Grounds, Keijo, October 26, 1929. Seeds deep purple.

82342 to 82358—Continued.

82345. No. 1619. From the Chosen Imperial Grounds, Keijo, October 26, 1929.

82346. VIBURNUM sp. Caprifoliaceae.

No. 1553. From the Imperial Botanical Garden, Keijo, October 26, 1929. A variety said to be native to Chosen, with handsome foliage varying from green to deep maroon, and black fruits.

82347 to 82351. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

82347. No. 1259. Near Kokato, Chosen, November 11, 1929. *Tonbu.* A brown-eyed, small, white variety used as food.

82348 to 82351. Obtained in the Chosen farmers' market, Keijo, October 31, 1929.

82348. No. 1697. *Sasage.* A medium-small variety, white, with brown eye; used for food.

82349. No. 1698. *Tongu.* A medium-small variety, white, with brown eye; used for food.

82350. No. 1836. *Tonbu.* A medium-small variety, white, with brown eye.

82351. No. 1837. *Tonbu.* A medium-small variety with brown eye; used for food.

82352. VITIS sp. Vitaceae. **Grape.**

No. 1548. Obtained along the railroad between Onohara and Kuraya, October 18, 1929. A low vine with small compact clusters of small deep-purple to black berries.

82353. ZELKOVA SERRATA (Thunb.) Makino (*Z. acuminata* Planch.). Ulmaceae. **Sawleaf zelkova.**

No. 1565. From the Imperial Botanical Garden, Keijo, October 27, 1929. A handsome tree up to 90 feet high, with a short trunk dividing into many upright spreading branches and forming a broad, round-topped head. The sharply serrate leaves are ovate and are usually 2 to 3 inches long, or on young shoots up to 8 inches long.

For previous introduction see No. 79148.

82354. (Undetermined.)

No. 1209. From the Chosen Government Forest Reservation near Keijo, November 6, 1929. A plant about 3 feet high which may be of value for green manure.

82355. (Undetermined.)

No. 1630. A shrub about 8 feet high used as an ornamental in the Chosen Imperial Grounds, Keijo, October 26, 1929. This somewhat resembles the tree lespedeza, but bears beanlike pods.

82356. GREWIA PARVIFLORA Bunge. Tiliaceae.

No. 1517. From the Forestry Experiment Station of the Government of Chosen, Keijo, November 6, 1929.

For previous introduction see No. 71146.

82357. (Undetermined.)

82342 to 82358—Continued.

No. 1611. A very viny legume growing along the road near Onohara, October 18, 1929. It makes a fairly abundant growth and may have value as green manure.

82358. (Undetermined.)

No. 1703. From the Forestry Experiment Station of the Government General of Chosen, Keijo, November 6, 1929. A small deciduous shrub about 5 feet high.

82359 to 82383.

From Nancy, France. Plants purchased from Lemoine & Sons. Received December 17, 1929.

82359 to 82365. CLEMATIS spp. Ranunculaceae.

82359. CLEMATIS CHRYSOCOMA Franch.

A woody vine up to 20 feet high, or often an upright shrub, with the young branchlets, leaves, and flower stalks covered with dense yellow pubescence. The leaves are made up of three ovate to obovate 3-lobed or coarsely toothed leaflets, and the pink-tinged white flowers, nearly 2 inches across, are borne either in fascicles of one to five from axillary buds or on the new growth, continuing to bloom through August and September. Native to western China.

82360. CLEMATIS FARGESII Franch.

A woody climber up to 20 feet high, with bipinnate leaves made up of five to seven 3-foliolate or incisely serrate ovate leaflets. The pure white flowers, 1 to 2 inches across, are solitary or in 3-flowered clusters and are borne on a peduncle 4 to 8 inches long. Native to western China.

For previous introduction see No. 49935.

82361 to 82363. CLEMATIS MONTANA Buch.-Ham. **Anemone clematis.**

82361. Variety *Perfecta.* A variety bearing lilac-white flowers with broad sepals.

82362. Variety *Superba.* A hybrid between *Clematis montana rubens* and *C. patens.* It is a very vigorous climber with large white flowers.

82363. Variety *Undulata.* A variety bearing large flowers which are white flushed with mauve and have waved sepals.

82364. CLEMATIS MONTANA LILACINA Lemoine.

A variety with large azure-lilac flowers.

82365. CLEMATIS MONTANA WILSONII Sprague.

A hardy climbing clematis native to western China. It often attains a height of 20 feet or more, and during June and July bears an abundance of sweet-scented flowers about an inch long, which are white, occasionally yellowish, or rosy tinged. There is generally a second flower in the autumn.

For previous introduction see No. 62705.

82359 to 82383—Continued.

82366. CLEMATOCLETHRA INTEGRIFOLIA Maxim. Dilleniaceae.

A deciduous climbing shrub with ovate-oblong leaves 2 to 4 inches long, and white clethralike flowers, either solitary or in few-flowered clusters, followed by berrylike black fruits. Native to northwestern China.

82367. ESCALLONIA sp. Escalloniaceae.

C. F. Ball. A red-flowered hybrid made by C. F. Ball at the Botanic Gardens, Glasnevin. It is believed to be a cross between *Escallonia rubra* and *E. macrantha.*

For previous introduction see No. 80101.

82368 to 82371. JASMINUM spp. Oleaceae. **Jasmine.**

82368. JASMINUM BEESIANUM Forrest and Diels. **Rosy jasmine.**

A slender shrub about 3 feet high, with grooved branchlets and leaves reduced to one lanceolate leaflet 2 to 4 inches long. The pink to deep-rose, salver-shaped fragrant flowers are borne in clusters of one to three. Native to western China.

82369. JASMINUM GIRALDII Diels.

A spreading deciduous shrub up to 6 feet high, with hairy, angled branchlets, compound leaves of three to five ovate leaflets, and yellow flowers in clusters of three to nine, followed by black fruits. Native to central China.

82370 and 82371. JASMINUM HETEROPHYLLUM Roxb.

82370. A stout shrubby jasmine with shiny, alternate, narrowly oval leaves up to 5 inches long. The flowers are yellow, up to one-third of an inch long, and occur in compound cymes.

82371. Variety *glabricymosum.* A smooth-flowered form of this Himalayan shrub which is said to be native to China. It is a strong-growing bush with a profusion of golden-yellow flowers.

For previous introduction see No. 76581.

82372 to 82374. NEILLIA spp. Rosaceae.

82372. NEILLIA LONGIRACEMOSA Hemsl.

A deciduous shrub up to 10 feet high, with ovate-cordate, usually entire leaves 2 to 3 inches long, and tubular pink flowers in dense solitary racemes sometimes 6 inches long. Native to western China.

82373. NEILLIA RIBESIOIDES Rehder.

A deciduous shrub 3 to 6 feet high, with triangular-ovate, usually 3-lobed leaves, and clusters of pink flowers. Native to western China.

82374. NEILLIA THIBETICA Franch.

A deciduous shrub closely related to *Neillia longiracemosa,* but usually 3 to 6 feet high, the leaves slightly three lobed, and the racemes shorter. Native to western China.

82375. NOTHOPANAX DAVIDI (Franch.) Harms. Araliaceae.

An evergreen shrub with smooth brownish bark, thick leathery bright-green entire or sometimes 3-lobed leaves, and rather large greenish-white flowers in terminal racemose umbels up to 6 inches long. Native to the mountains of Moupin, China.

82376. OSMANTHUS ARMATUS Diels. Oleaceae.

An evergreen shrub, native to China, up to 15 feet high, with opposite, oblong, spiny-toothed leaves 4 to 6 inches long, axillary or terminal panicles of small fragrant white flowers, and ovoid fruits.

For previous introduction see No. 77688.

82377. OSMANTHUS SERRULATUS Rehder.

An evergreen shrub or small tree, native to China, sometimes 35 feet high, with coriaceous obovate spiny serrulate leaves 3 to 5 inches long, panicles of fragrant white flowers, and black fruits. It is closely related to *Osmanthus fragrans.*

For previous introduction see No. 77689.

82378. STYRAX JAPONICUM Sieb. and Zucc. Styracaceae. **Japanese snowbell.**

Variety *fargesii.* A handsome variety introduced from central China by the late Maurice de Vilmorin. It differs from the well-known type by its taller branches, more ample foliage, and larger pendulous flowers of a snowy whiteness.

For previous introduction see No. 78156.

82379 to 82383. VIBURNUM spp. Caprifoliaceae.

82379. VIBURNUM BITCHIUENSE Makino. **Yeddo viburnum.**

A deciduous shrub, closely related to *Viburnum carlesii,* with more slender branches and smaller leaves and cymes. It is a shrub 3 to 5 feet high, bearing fragrant white flowers and blue-black fruits. Native to Japan.

82380. VIBURNUM CYLINDRICUM Buch.-Ham.

A handsome evergreen shrub or small tree which is very distinct because of its tubular-campanulate flowers. The dark dull-green, nearly entire oblong leaves are 3 to 8 inches long, the white flowers have violet anthers, and the fruits are purplish black. Native to the Himalayas and western China.

For previous introduction see No. 47826.

82381. VIBURNUM FRAGRANS Bunge.

A shrub up to 10 feet high, bearing an abundance of very fragrant flowers which are white shaded with rose and appear in the early spring before the leaves. The elliptic, serrate leaves are 2 to 4 inches long, with purplish petioles, and the ovoid fruits are blue black. Native to northern China.

For previous introduction see No. 66319.

82382. VIBURNUM PROPINQUUM Hemsl.

An evergreen shrub with lustrous reddish-brown branchlets, elliptic to ovate-lanceolate nearly entire leaves 2 to 4 inches long, and greenish-white flowers followed by globular blue-black fruits. Native to central and western China.

82359 to 82383—Continued.

82383. VIBURNUM UTILE Hemsl. Service viburnum.

A handsome evergreen shrub of rather open habit with dark glossy green, leathery leaves and pure white flowers produced in dense, terminal, rounded trusses during the spring. These are succeeded by oval, blue-black berries. The shrub is native to western China, where it is said to grow on limestone soils.

For previous introduction see No. 66323.

82384 to 82396.

From Erfurt, Germany. Bulbs purchased from Haage & Schmidt. Received December 16, 1929.

82384 to 82394. ALLIUM spp. Liliaceae. Onion.

82384. ALLIUM ATROPUREUM Waldst. and Kit.

For previous introduction and description see No. 82009.

82385. ALLIUM AZUREUM Hort.

A blue-flowered onion, to be grown for identification.

82386. ALLIUM CYANEUM Regel.

A rather dwarf plant, less than a foot high, with small heads of pendulous bright-blue flowers. Native to northern China.

For previous introduction see No. 78979.

82387. ALLIUM GIGANTEUM Regel.

One of the tallest members of the genus, becoming 4 feet high. It is native to the Himalayas. The bulbs are large, and the fleshy leaves are about 18 inches long, lying close to the ground. The bright-lilac flowers are in heads 4 inches in diameter.

For previous introduction see No. 78981.

82388. ALLIUM GLAUCUM Hort.

An onion with broad glaucous leaves and small heads of rose-colored flowers in September.

82389. ALLIUM NARCISSIFLORUM Vill.

For previous introduction and description see No. 82016.

82390. ALLIUM OSTROWSKIANUM Regel.

For previous introduction and description see No. 82017.

82391. ALLIUM PENDULINUM Tenore.

An alpine, native to Italy, with linear keeled leaves and long-peduncled nodding whitish flowers.

For previous introduction see No. 78990.

82392. ALLIUM ROSENBACHIANUM Regel.

A bulbous perennial, native to Turkestan, with oblong lanceolate leaves 8 inches high, and a large globular umbel of purple flowers on a scape 2 feet high.

For previous introduction see No. 76209.

82393. ALLIUM SCHUBERTII Zucc.

A large bulbous plant, native to Asia Minor and Persia, with broadly strap-shaped leaves, and huge subglobose rose-colored flower heads which are at times a foot in diameter.

82384 to 82396—Continued.

82394. ALLIUM STIPITATUM Regel.

A herbaceous perennial with linear-lanceolate leaves, a stem 2 to 3 feet high, and many-flowered hemispheric umbels of rose-lilac fragrant flowers. Native to central Asia.

82395. NOTHOSCORDUM FRAGRANS (Vent.) Kunth. Liliaceae.

A bulbous plant, native to tropical America, closely related to the onion. The bulb is round and yellowish white, and the linear, obtuse leaves are 8 to 12 inches long. The fragrant flowers, white flushed with pink, have purplish stamens and anthers and are borne on a scape 20 inches high.

For previous introduction see No. 79175.

82396. ROSCOEA PURPUREA J. E. Smith. Zinziberaceae.

Variety *sikkimensis*. A form with more numerous flowers of a different shade of purple from the type, which is a herbaceous perennial a foot high with lanceolate leaves and purple, pale-lilac, or white flowers in a sessile spike. Native to the Himalayas in northern India.

82397. QUERCUS SUBER L. Fagaceae. Cork oak.

From Santa Olalla, Huelva, Spain. Acorns presented by Edward E. Silvers, Armstrong Cork Co., Seville, through Frank L. Goll, Bureau of Plant Industry. Received December 20, 1929.

For previous introduction see No. 76019.

82398. FICUS ALTISSIMA Blume. Moraceae. Lofty fig.

From Oneco, Fla. Plants presented by N. A. Reasoner, Royal Palm Nurseries. Received November 4, 1929.

A large spreading tree native to the tropical Himalayas. It is said to yield as good caoutchouc as its relative, *Ficus elastica*.

For previous introduction see No. 47843.

82399. BUTIA CAPITATA (Mart.) Beccari (*Cocos capitata* Mart.). Phoenicaceae. Palm.

From Nice, France. Seeds collected by Dr. H. S. Fawcett, College of Agriculture, University of California, Riverside, Calif. Received December 12, 1929.

A large coconutlike palm, native to Argentina, with a spineless trunk, pinnate leaves, and large bunches of small edible fruits. It is said to be hardier than any species of Cocos.

For previous introduction see No. 77149.

82400. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. Apple.

From Saonara, near Padua, Italy. Trees purchased from Fratelli Sgaravatti. Received December 14, 1929.

Limoncella. A winter apple producing ovoid, medium-sized fruits with yellow skin and tender flesh of exquisite flavor.

82401 to 82403.

From Heijo, Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 16, 1929.

82401 to 82403—Continued.

82401. CRATAEGUS sp. Malaceae. **Hawthorn.**

No. 1784. Obtained in the market, November 18, 1929. *Irubin.* The native name may mean hawthorn or small fruit. The fruits are medium sized.

82402. CELASTRUS ARTICULATUS Thunb. Celastraceae. **Bittersweet.**

No. 1768. A vine climbing over a rosebush along the roadside northwest of Heijo, November 17, 1929.

82403. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

No. 1282. November 16, 1929. *Purakon.* A variety with medium-sized oval-shaped brown seeds, said to be used for cattle feed when boiled.

82404 and 82405. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Italy. Seeds obtained through H. L. Westover, Bureau of Plant Industry. Received December 20, 1929.

82404. From the Stabilimento Guido Calosi, Florence.

82405. From Fratellia Ingegnolia, Milan.

82406. FRAGARIA HAGENBACHIANA Lange. Rosaceae. **Strawberry.**

From Paris, France. Plants presented by Vilmorin-Andrieux & Co. Received December 26, 1929.

A French strawberry closely related to *Fragaria viridis,* but flowering earlier and having all the leaflets petiolate.

82407. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Rahimabad, Persia. Seedlings collected by W. E. Whitehouse, Bureau of Plant Industry. Received December 27, 1929.

No. 174. From the nursery of Cholam Reza Yazdi, November 19, 1929. Seedling trees grown by a Persian pistache grower from selected nuts of large size.

82408. BROMELIA PINGUIN L. Bromeliaceae.

From Rio Piedras, Porto Rico. Seeds presented by Pedro Osuna, Horticulturist, Insular Experiment Station, Department of Agriculture and Labor. Received December 27, 1929.

A tropical succulent plant, 3 to 4 feet high, with spiny margined leaves that turn red with age. The reddish flowers are in dense panicles, and the acid fruits, the size of plums, yield a cooling juice. Native to the West Indies.

For previous introduction see No. 76199.

82409. CEIBA AESCULIFOLIA (H. B. K.) Britt and Baker. Bombacaceae.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received December 27, 1929.

The horsechestnut-leaved pochote is a medium-sized tree 20 to 30 feet high and usually diffusely branched. Its trunk and larger branches bear stout coarse spines. The leaves are palmately compound, with five to seven elliptic or obovate leaflets, 2 to 8 inches long, usually glaucescent beneath. The flowers are white at first, but turn brown with age. The petals are 4 to 6 inches long, yellow, hairy on the outside. The seed pods are ellipsoid oblong, 5 to 8 inches long, five celled, with five segments about one-fourth of an inch thick, and bearing on the placental membranes white downlike kapok and brown finely roughened seeds, irregularly spheroidal, one-fourth of an inch in diameter. The down, consisting of fine unicellular hairs about an inch long, may serve the same purpose as kapok for filling mattresses, cushions, life preservers, and insulation. This tree is native from Vera Cruz across southern Mexico to southern Jalisco and southward to Guatemala.

82409—Continued.

82410 to 82412. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

From Keijo, Chosen. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

Obtained from trees at the residence of Chinzo Herata on Keijo Shrine, November 21, 1929.

82410. No. 1931. *Banshi.* A variety bearing rather small flat fruits.

82411. No. 1932. *Banshi.* A rather small flat persimmon, supposed to be the same as No. 1931 [No. 82410], but the scions are from a different tree.

82412. No. 1933. *Dangu rana.* A rather small round-fruited variety.

82413 to 82418. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Palestine. Seeds presented by A. Grasovsky, Subinspector of Agriculture and Forests, Southern Circle, Jerusalem. Received December 30, 1929.

82413. No. 1. *Baladi.* From Jerusalem.

82414. No. 2. *Baladi.* From Motza.

82415. No. 6. *Baladi.* From Safed.

82416. No. 3. *Franji.* From Nazareth.

82417. No. 4. *Franji.* From Artas.

82418. No. 5. *Franji.* From Acre.

82419 to 82446.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

82419. CHRYSANTHEMUM MORIFOLIUM (Ramat.) Hemsl. Asteraceae. **Mulberry chrysanthemum.**

No. 1745. Obtained at the base of Shariin Fuji to the south and southeast of Shariin, November 14, 1929. A rather tall-growing wild species with yellow flowers about half an inch in diameter.

82420. COCCULUS TRILOBUS (Thunb.) DC. Menispermaceae. **Japanese snailseed.**

No. 1738. Growing near the top of the mountain near the office of the village society at Koka, island of Kokato, November 10, 1929. Fruits bright blue.

82421. DIOSPYROS LOTUS L. Diospyraceae. **Dateplum.**

82419 to 82446—Continued.

No. 1730. Obtained from young trees or rather water sprouts at Koka, island of Kokato, November 10, 1929. A native wild species used for stocks.

82422. CELASTRUS ARTICULATUS Thunb. Celastraceae. **Bittersweet.**

No. 1719. From a vine on the hill north of the village of Koka, near the office of the village society, island of Kokato, November 10, 1929.

82423. EUONYMUS sp. Celastraceae.

No. 1766. Near the village of Ryugakaku, northwest of Heijo, November 17, 1929. *Daido gun.* A dwarf-growing species.

82424. EUONYMUS sp. Celastraceae.

No. 1771. Near the village of Ryugakaku, November 17, 1929. Small plants with winged branches.

82425 to 82427. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

82425. No. 1748. Obtained in the market at Kokaikashu, November 15, 1929. Used chiefly for noodles.

82426. No. 1749. Obtained in the market at Kokaikashu, November 15, 1929. Used chiefly for noodles.

82427. No. 1789. Heijo, November 18, 1929. Used chiefly for noodles.

82428. FRAXINUS sp. Oleaceae. **Ash.**

No. 1746. From a small tree at the base of Shariin Fuji, November 14, 1929. One tree in the village measured 18 inches or more in diameter and 50 feet or more high. It is probably a good timber tree.

82429 and 82430. GOSSYPIUM NANKING Meyen. Malvaceae. **Cotton.**

82429. No. 1735. Koka, island of Kokato, November 10, 1929. From a small planting on very poor land, the plants measuring 18 inches to 2 feet high.

82430. No. 1770. Ringen, November 17, 1929. Seeds from what was left in a small planted area of Chosen native cotton.

82431. HEMEROCALLIS sp. Liliaceae. **Daylily.**

No. 1772. Obtained from plants in the woods near the road a short distance from the small village of Ringen, November 17, 1929. The flower stalks are 1 to 2 feet high and the flowers probably light yellow.

82432 to 82438. LESPEDEZA spp. Fabaceae. **Bushclover.**

82432. LESPEDEZA sp.

No. 1273. From plants near the top of Shariin Fuji, November 14, 1929. A fairly erect variety 12 to 18 inches high.

82433. LESPEDEZA sp.

No. 1274. From plants along the slope of Shariin Fuji, near Shariin, November 14, 1929. An erect variety, 2 to 3 feet high, with an abundance of pods on the branches and main stem.

82434. LESPEDEZA sp.

No. 1275. From plants along the slope of Shariin Fuji, Shariin, November 14, 1929. An erect variety, 2 to 3 feet high, with buttonlike clusters of pods on the main stem and branches.

82435. LESPEDEZA sp.

No. 1778. From plants along the mountain side near Fusanmeu, November 17, 1929. A variety over 3 feet high.

82436. LESPEDEZA sp.

No. 1779. Gathered along the mountain side near Fusanmeu, November 17, 1929. A variety of excellent growth 10 to 16 inches high, with an abundance of pods.

82437. LESPEDEZA sp.

No. 1780. Gathered from plants along the mountain side near Fusanmeu, November 17, 1929. A variety over 3 feet high, bearing pods along the main stem and branches.

82438. LESPEDEZA sp.

No. 1781. Gathered from plants along the mountain side near Fusanmeu, November 17, 1929. A variety 3 to 4 feet high.

82439. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 2015. Obtained in the Chosen grain market at Keijo, November 21, 1929. Reddish, medium-sized, wrinkled seeds.

82440. RHAMNUS sp. Rhamnaceae. **Buckthorn.**

No. 1783. Northwest of Heijo. A variety over 5 feet high.

82441 to 82443. RHODODENDRON spp. Ericaceae. **Azalea.**

82441. RHODODENDRON sp.

No. 1750. Obtained from the garden of the Chikuzenya Inn, Shariin, November 15, 1929. A rather small-leaved variety 5 to 6 feet high.

82442. RHODODENDRON sp.

No. 1767. From small plants on the mountain side northwest of Heijo, November 17, 1929.

82443. RHODODENDRON sp.

No. 1773. From small plants, seldom more than 18 inches high, growing on an exposed dry rocky hill or mountain side, Ringen, November 17, 1929.

82444. RIBES sp. Grossulariaceae.

No. 1721. Collected just back of the office of the village society, Funai or Koka, island of Kokata, November 10, 1929, and also from plants in the village of Sanseri.

82445. ROSA sp. Rosaceae. **Rose.**

No. 1769. Collected from plants along the roadside northwest of Heijo, November 17, 1929. A variety 6 feet or more high which did not resemble the common wild rose of Japan.

82446. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

No. 1271. From plants in front of the Western Chosen Agricultural Experiment Station, Shariin, November 13, 1929. A variety about 2 feet high, with many stems and an abundance of seeds.

82447. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.
Common wheat.

From Russia. Seeds collected by A. J. Bruman. Received December 26, 1929.

From the Chongar Peninsula, a small peninsula in the Azof Sea, north of the Crimea, August, 1929. *Krimka Chongarka.* A winter wheat of the variety *Krimka* which was brought to Chongar from the Crimea about seven or eight years ago. It has apparently become thoroughly acclimated to the severe winters and extremely dry summers of Chongar. The name *Krimka Chongarka* is suggested for the reason that the variety has become quite distinct from the original Krimka.

82448 to 82467. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.
Common wheat.

From Sydney, New South Wales, Australia. Seeds presented by J. T. Pridham, plant breeder of the Cowra Experiment Farm of the Department of Agriculture. Received November 1, 1929.

82448. *Aussie.*

82449. *Bena.*

82450. *Bobin.*

82451. *Boolaroo.*

82452. *Boonoo.*

82453. *Bredbo.*

82454. *Burrill.*

82455. *Canberra.*

82456. *Canimbla.*

82457. *Duchess.*

82458. *Exquisite.*

82459. *Gluyas.*

82460. *Gresley.*

82461. *Marshall's No. 3.*

82462. *Nabawa.*

82463. *Ranee.*

82464. *Union.*

82465. *Wandilla.*

82466. *Waratah.*

82467. *Yandilla King.*

82468. DIOSCOREA SEPTEMLOBA Thunb. Dioscoreaceae. **Yam.**

From Keijo, Chosen. Tubers collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

No. 1929. November 21, 1929. The tubers received were irregularly subglobose and weighed slightly more than a pound each. The flesh of this yam is fine grained and very white and when cooked might easily pass for a white potato of exceptionally high quality.

82469. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.
Common wheat.

From Heijo, Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

No. 1785. November 18, 1929. *Poubiru.* Said to be a spring wheat.

82470 to 82488.

From Chosen. Seeds presented by T. Watanabe, Forest Experiment Station, Keijo. Received December 26, 1929.

82470. ABIES HOLOPHYLLA Maxim. Pinaceae. **Needle fir.**

From Kyosen. A tall, handsome fir, eventually 100 feet or more high, with stout spreading or ascending branches and dark-green foliage.

For previous introduction see No. 66257.

82471. ACER PSEUDO-SIEBOLDIANUM Komarov. Aceraceae. **Maple.**

From Hosen. A small maple, native to Manchuria, with cordate leaves divided into 9 to 11 lanceolate serrate lobes, and corymbs of purple flowers.

For previous introduction see No. 78399.

82472. ACER TRIFLORUM Komarov. Aceraceae. **Maple.**

From Hosen. A tree up to 25 feet high, with glabrous branchlets. The leaves are made up of three oblong-lanceolate leaflets with entire or coarsely toothed margins, and the flowers, in groups of three, are followed by densely pubescent fruits having wide-spreading, nearly straight wings nearly 2 inches long. Native to Chosen and Manchuria.

82473. ALNUS HIRSUTA SIBIRICA (Fisch.) C. Schneid. Betulaceae. **Alder.**

From Keijo. A handsome tree, native to Siberia, 60 feet high, of broad-pyramidal habit and vigorous growth, with broadly ovate leaves, about 5 inches long, which are dark green above and glaucous beneath.

For previous introduction see No. 76050.

82474. BETULA DAVURICA Pall. Betulaceae. **Birch.**

From Keijo. A tree up to 60 feet high, with widespreading branches and purplish-brown flaky bark. The broadly wedge-shaped leaves, 2 to 4 inches long, are dark green above and have serrate margins.

For previous introduction see No. 78400.

82475. CORNUS COREANA Wanger. Cornaceae. **Dogwood.**

From Heizan. A tree, native to Chosen, up to 60 feet high, with reddish-brown branchlets, dark-green, elliptic leaves 3 to 6 inches long, loose clusters of small white flowers, and black fruits.

For previous introduction see No. 78401.

82476. CORNUS OFFICINALIS Sieb. and Zucc. Cornaceae.
Japanese cornelian-cherry.

From Hosen. A shrub or small tree up to 30 feet high, closely resembling the common cornelian-cherry, *Cornus mas.* The ovate to elliptic leaves are 2 to 6 inches long and have large axillary tufts of brown hairs on the under side. The umbels of small yellow flowers are followed by oblong scarlet fruits. Native to Japan.

For previous introduction see No. 56024.

82470 to 82488—Continued.

82477. FORSYTHIA KOREANA Nakai. Oleaceae.

From Keijo. While a place of publication or a description for this name has not been found, the forsythias are hardy ornamental shrubs with yellow flowers much used in ornamental plantings, and the addition of another form is desirable.

82478. FRAXINUS CHINENSIS RHYNCHOPHYLLA (Hance) Hemsl. Oleaceae. **Ash.**

From Junten. A rather small ash, native to China, 40 feet or less in height, with dark-green leaves, lighter beneath, consisting of five to seven narrowly oblong, irregularly toothed leaflets 2 to 5 inches long.

For previous introduction see No. 66258.

82479. FRAXINUS MANDSHURICA Rupr. Oleaceae. **Manchurian ash.**

From Inritsu. A handsome ash, often 100 feet high, native to Japan and the adjacent parts of the Asiatic mainland. The leaves are up to 15 inches long, with dull-green bristly leaflets. The tree is said to be susceptible to late spring frosts.

For previous introduction see No. 71390.

82480 to 82488. LESPEDEZA spp. Fabaceae.

From Keijo.

82480. LESPEDEZA BICOLOR Turcz. **Shrub bushclover.**

A bushy, herbaceous perennial, native to Japan, which bears a profusion of rosy purple flowers, during the early autumn, practically covering the drooping branches which sometimes become 6 feet in length.

For previous introduction see No. 69812.

82481. LESPEDEZA FORMOSA (Vogel) Koehne. **Purple bushclover.**

Received as *Lespedeza japonica intermedia,* which appears to be a form of *L. formosa. L. japonica intermedia* was originally described as an erect semishrubby plant, 6 to 12 feet high, with trifoliolate leaves of oblong leaflets and racemes of rosy purple flowers. Native to Chosen.

82482. LESPEDEZA MAXIMOWICZII C. Schneid. **Bushclover.**

A shrubby bushclover from Chosen, resembling *Lespedeza buergeri,* from which it differs in the structure of its calyx. The leaves are very thin, dull-green above, bright green below, and the violet flowers are arranged in loose whorls.

82483. PINUS KORAIENSIS Sieb. and Zucc. Pinaceae. **Korean pine.**

From Hosen. A 5-needle pine, up to 100 feet high, native to Japan. It produces valuable lumber and edible seeds and is also of ornamental value, being slow in growth and forming a dense broad pyramidal head with handsome foliage.

For previous introduction see No. 75680.

82484. PINUS TABULAEFORMIS Carr. (*P. leucosperma* Maxim.). Pinaceae. **Chinese pine.**

82470 to 82488—Continued.

From Mozan. A pine up to 75 feet high, with dark-gray bark on the trunk, red on the branches, and orange or grayish-yellow branchlets. The glaucescent leaves, usually two in a cluster, are stout and 3 to 6 inches long, and the ovoid cones, 2 to 4 inches long, are pale tawny yellow, changing to dark brown and persisting for several years.

For previous introduction see No. 78405.

82485. RHODODENDRON SCHLIPPENBACHII Maxim. Ericaceae. **Royal azalea.**

For previous introduction and description see No. 82163.

82486. SYRINGA OBLATA DILATATA (Nakai) Rehder. Oleaceae. **Lilac.**

From Heizan. A loosely branched shrub up to 12 feet high, with ovate, long-pointed leaves 6 inches long, and loose clusters of pale, purple-lilac flowers. Native to Chosen.

For previous introduction see No. 78412.

82487. ULMUS PARVIFOLIA Jacq. Ulmaceae. **Leatherleaf elm.**

From Keijo. Received as *Ulmus sieboldii koreana,* which is a form of *U. parvifolia,* said to differ from the usual form in having deciduous rather than half-evergreen leaves, persistent deeply fissured bark, and larger fruits. Native to Chosen.

82488. ZELKOVA SERRATA (Thunb.) Makino (*Z. acuminata* Planch.). Ulmaceae. **Sawleaf zelkova.**

For previous introduction and description see No. 82353.

82489 to 82495. DIOSPYROS spp. Diospyraceae.

From Koka, island of Kokato, Chosen. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82489 to 82494. DIOSPYROS KAKI L. f. **Kaki persimmon.**

82489. No. 1724. November 10, 1929. *Shushi.* From a tree about 30 or 40 years old, producing round, somewhat-flattened fruits about 2 inches in diameter. Said to be an astringent and seedless variety and is used rather commonly for drying.

82490. No. 1725. November 10, 1929. *Panyori* or *Panshi.* A flat variety 2 to 3 inches across and over 1 inch deep. This variety is rather abundant, and the fresh fruits are extensively used on the island. At one time they were used for drying.

82491. No. 1726. November 10, 1929. *Koka.* A large flat persimmon somewhat larger than the Panyori [No. 82490], but not so thick and not so extensively grown, though the fruits are very good; they are nonastringent and seedless.

82492. No. 1727. November 10, 1929. *Tizon.* A good-sized flat variety, grown only for local use.

82493. No. 1728. November 10, 1929. *Choshi.* An extensively grown variety producing seedless, astringent

82489 to 82495—Continued.

fruits which are somewhat longer pointed than those of No. 1729 [No. 82494].

82494. No. 1729. November 10, 1929. *Choshi.* A medium-long pointed and round variety. While not the largest, it is one of the best.

82495. DIOSPYROS LOTUS L. **Dateplum.**

No. 1730. November 10, 1929. From water sprouts from an old kaki tree.

82496. EUONYMUS sp. Celastraceae.

From Chosen. Plant collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

No. 1742. From the mountain adjacent to the boat landing at Kokan, island of Kokato, November 11, 1929. The dwarf habit of this Euonymus may be due to adverse conditions on the mountains, combined with annual cutting back. The husk of the fruit is pink and the berries are red.

82497 to 82503. PHASEOLUS spp. Fabaceae.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

82497 to 32501. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

82497. No. 1267. From Kokato, November 11, 1929. *Chapa.* A medium-small olive-and-black marbled variety, used, after grinding, for cattle feed.

82498. No. 1268. From Kokato, November 11, 1929. *Chapa.* A medium-small greenish-yellow variety.

82499. No. 1798. From the Chosen grain market, Keijo, November 21, 1929. *Jappa.* A mixed sample of varieties which are coarsely ground and used as cattle feed.

82500. No. 2001. From the Chosen grain market, Keijo, November 21, 1929. *Kepipa.* A medium-large gray-and-black variety, coarsely ground and used as cattle feed.

82501. No. 2017. From the Chosen grain market, Keijo, November 21, 1929. A medium-sized red-and-white variety, used, when ground, for cattle feed.

82502. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 1921. From the Chosen grain store, Heijo, November 18, 1929. *Rokuto.* A medium-sized glossy green variety with a white hilum; used for sprouts.

82503. PHASEOLUS VULGARIS L. **Common bean.**

No. 1276. *Kotebo.* A small white bean from Shariin, November 14, 1929; originally grown in the Kanto section, northeastern Manchuria.

82504 and 82505.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82504 and 82505—Continued.

82504. QUERCUS sp. Fagaceae.

No. 1545. Between Onohara and Kuraya, October 18, 1929.

82505. QUERCUS sp. Fagaceae.

No. 1546. From Kagemori, October 18, 1929. From an evergreen tree, 30 feet or more high.

82506 to 82508.

From Keijo, Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929.

82506. CELASTRUS ARTICULATUS Thunb. Celastraceae. **Bittersweet.**

No. 1561. October 27, 1929. A fine specimen with corky or winged branches which showed most beautiful fall coloration.

82507. CELASTRUS ARTICULATUS Thunb. Celastraceae. **Bittersweet.**

No. 1555. A vine growing to the top of a tree about 20 feet high, in the grounds of the Chosen Hotel. The yellow husks of the fruit open and persist, showing the red fruit.

82508. EUONYMUS ALATUS (Thunb.) Rupr. Celastraceae. **Winged euonymus.**

No. 1560. October 27, 1929. A species with corky or winged branches.

For previous introduction see No. 81642.

82509 to 82598. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

82509 to 82511. Obtained near Shariin, November 13, 1929.

82509. No. 1269. *Hinkon.* A variety with medium-sized glossy yellow seeds with a pale hilum; used for miso, soy sauce, and tofu.

82510. No. 1270. *Pokon.* A variety with brown, medium-sized, much flattened seeds, very much the color and shape of the Virginia variety. The plants are somewhat slender and 36 to 42 inches high. It is commonly called the cow or ox bean.

82511. No. 1272. Selected out of the Hinkon variety. The seeds are greenish yellow, more or less mottled with brown, and have a brown hilum. They are flattened and much like the Virginia variety in shape. Used when boiled for cattle feed.

82512 to 82527. Heijo, November 16, 1929.

82512. No. 1277. *Chankon.* A yellow, medium-small to small variety with a pronounced brown hilum; said to be used for sprouts.

82513. No. 1278. *Chinunikon.* A medium-sized, nearly round, brown variety, said to be used for cattle feed.

82514. No. 1279. *Purunkon.* A mixture of yellow-seeded varieties ranging from medium small to medium large; said to be used for cattle feed.

82509 to 82598—Continued.

82515. No. 1280. *Chokute.* A mixture of brown-seeded varieties ranging from medium to medium large; said to be used for cattle feed.

82516. No. 1281. *Komujankon.* A medium-sized, oval, black variety, said to be used as boiled beans and in making confections.

82517. No. 1283. *Suigen.* A medium-sized to medium-large yellow variety, used for bean curd, miso, and soy sauce. The hilum varies from pale to light brown.

82518. No. 1284. A medium-sized oval variety with a pale-brown hilum; used for bean curd, miso, and soy sauce.

82519. No. 1285. *Kaijankon.* A large, oval, yellow variety with a light-brown hilum; used for bean curd, miso, and soy sauce.

82520. No. 1286. *Chankon.* A medium-sized, oblong, greenish-yellow variety, said to be used for sprouts.

82521. No. 1287. *Tatekon.* A medium-sized, oval, yellow variety with a pale to light-brown hilum; said to be used for miso, soy sauce, and bean curd.

82522. No. 1288. *Irute.* A medium-small to medium-sized oval yellow variety with a pale to light-brown hilum; used for bean curd, miso, and soy sauce.

82523. No. 1289. *Tatekon.* A mixture of medium-sized yellow varieties with the hilum from pale to dark brown; used as boiled beans and also boiled for cattle feed.

82524. No. 1290. *Chonte.* A medium-sized greenish-yellow variety with a slate-black hilum; used as boiled beans and also boiled for cattle feed.

82525. No. 1291. *Panunkon.* A mixture, evidently of hybrid origin, of medium-sized greenish-yellow seeds; used for cattle feed when boiled.

82526. No. 1292. *Purunumkon.* A medium-sized oval green variety, used as boiled beans and also boiled for cattle feed.

82527. No. 1293. *Pumunkon.* A medium-sized oval greenish-yellow variety with a pale to light-brown hilum; used as boiled beans and also boiled for cattle feed.

82528. No. 1294. Near Kokaishu, November 15, 1929. *Komjankon.* A medium-large, somewhat flattened, black variety, used as boiled beans and also in making confections.

82529. No. 1295. Near Kokaishu, November 15, 1929. *Ginta Untei.* A mixture of yellow varieties, said to be used as boiled beans and also boiled for cattle feed.

82530 to 82533. From the Chosen farmers' market, Shariin, November, 1929.

82530. No. 1296. *Chafatekon.* A medium-sized oval yellow variety with a pale hilum; used for miso and soy sauce.

82531. No. 1297. *Sonkon.* A mixture of medium-small to small yellow varieties, used for sprouts.

82509 to 82598—Continued.

82532. No. 1298. *Oiarukon.* A medium-large, oval, yellow variety with a pale to light-brown hilum; used for bean curd, miso, and soy sauce.

82533. No. 1299. *Sankon.* A mixture of medium-small, yellow, greenish-yellow, and brown varieties; used entirely when boiled for cattle feed.

82534. No. 1300. From the Chosen Kogyo Co. farm near Kokaikoshu, November 15, 1929. *Chotan.* A medium-sized, oval, glossy yellow variety, mostly exported to the main island of Hondo for making soy sauce, miso, and bean curd.

82535 to 82537. From the Chosen farmers' market, Shariin, November 15, 1929.

82535. No. 1751. *Chankon.* A medium-sized oval glossy yellow variety, used for making bean curd, soy sauce, and miso.

82536. No. 1752. *Chunonkon.* A small, greenish-yellow to yellow, round variety with a pale to light-brown hilum; used for sprouts.

82537. No. 1753. *Tatteikon.* A mixed sample of yellow varieties, used as boiled beans and also in making miso and soy sauce.

82538. No. 1754. From a warehouse in Kokaikoshu, November 15, 1929. *Koshumitta.* A medium-small, nearly round, glossy yellow variety, used for miso, soy sauce, and bean curd.

82539. No. 1755. From a warehouse in Kokaikoshu, November 15, 1929. *Chotanchame.* A medium-sized, nearly round, glossy yellow variety with more or less variation in the color of the hilum; used for bean curd, soy sauce, and miso.

82540 to 82547. From the Chosen farmers' market, Shariin, November 15, 1929.

82540. No. 1756. *Bankon.* A medium-sized oval glossy yellow variety, used for soy sauce, bean curd, and miso.

82541. No. 1757. *Chabatekon.* A medium-sized oval glossy yellow variety, used for making miso, soy sauce, and bean curd.

82542. No. 1758. A medium-large, nearly round variety with a light-brown hilum; used for making bean curd, soy sauce, and miso.

82543. No. 1759. *Pattekon.* A mixture of medium-small, yellow, greenish-yellow, and brown varieties; used when boiled for cattle feed.

82544. No. 1760. *Chankon.* A medium-small, much flattened, yellow variety more or less mixed with greenish-yellow and brown varieties; used when boiled for cattle feed.

82545. No. 1761. *Oiarukon.* A medium-large, nearly round, yellow variety with a light-brown hilum; used for bean curd, miso, and soy sauce.

82546. No. 1762. *Chonte.* A medium-sized oval glossy yellow variety with a pale hilum; used for soy sauce, miso, and bean curd.

82547. No. 1763. *Chunnonkon.* A very small, nearly round, yellow variety, used for sprouts and also boiled for cattle feed.

82509 to 82598—Continued.

82548. No. 1764. Kokaikoshu, November 16, 1929. *Chotan.* A medium-sized oval glossy yellow variety with a pale hilum; used in making miso, bean curd, and soy sauce.

82549. No. 1774. Near Ryugaku, November 17, 1929. *Chonkon.* A medium-sized green oval variety with a mixture of brown and slate-black hilums; used for food when boiled.

82550. No. 1775. Near Fusanmen, November 17, 1929. *Pakute.* A mixture of yellow-seeded varieties, used for boiled beans, soy sauce, and miso, and as cattle feed when boiled.

82551. No. 1776. Near Ryugaku, November 17, 1929. *Papute.* A medium-sized yellow oval variety with a pale hilum; used in making miso and soy sauce, and also boiled with rice.

82552 to 82558. From Keijo, November, 1929.

82552. No. 1790. *Hinkon.* A mixture of yellow varieties ranging from medium small to very large; used as boiled beans and also boiled for cattle feed.

82553. No. 1791. *Komujonkon.* A large, black variety, used in making soybean confections.

82554. No. 1792. *Haiyonkon.* A large, oval, yellow variety with a pale hilum; used in making miso, natto, soy sauce, and bean curd.

82555. No. 1796. *Chanpakute.* A medium-sized oval glossy yellow variety with a pale hilum; used in the manufacture of bean curd, soy sauce, natto, and miso.

82556. No. 1797. *Futte.* A medium-sized, somewhat flattened black variety, used in making soybean confections, especially candied beans.

82557. No. 1799. *Kirgunte.* A medium-small, nearly round green variety with a light-brown hilum; used for sprouts.

82558. No. 1800. *Somokute.* A medium-small round black variety, used in making soybean confections.

82559 to 82578. From Heijo, November, 1929.

82559. No. 1901. *Kirupakute.* A mixed sample of yellow varieties varying in size and shape and in the color of the hilum; used for miso and soy sauce, and also boiled for cattle feed.

82560. No. 1902. *Pakute.* A mixture of yellow and greenish-yellow varieties; used for miso and soy sauce, and also boiled for cattle feed.

82561. No. 1903. *Shote.* A medium-small, nearly round, yellow variety with a light-brown hilum; used for sprouts.

82562. No. 1904. *Irukon.* A medium-sized oval yellow variety with a pale hilum, somewhat similar to *Chotan.* Used for miso, soy sauce, and tofu (bean curd).

82563. No. 1905. *Chikamunkon.* A medium-small green variety with a brown hilum; used for sprouts.

82509 to 82598—Continued.

82564. No. 1906. *Kirumukon.* A mixed sample of yellow-seeded varieties; used for miso and soy sauce, and also boiled for cattle feed.

82565. No. 1907. *Purunkon.* A medium-sized greenish-yellow variety with a pale hilum, resembling the Tokio [No. 17267]; used for cattle feed.

82566. No. 1908. *Purukunkon.* A medium-sized oval green variety with a white hilum; used as boiled beans and also boiled for cattle feed.

82567. No. 1909. *Namuri.* A medium-small greenish-yellow variety with variations in the color of the hilum; used for cattle feed when boiled.

82568. No. 1910. *Purute.* A medium-large seal-brown variety, used as boiled beans for cattle feed.

82569. No. 1911. *Kon.* A medium-small yellow variety with a brown hilum; used for boiled beans and also boiled for cattle feed.

82570. No. 1912. *Fukuto.* A medium-large brown variety, used for cattle feed when boiled.

82571. No. 1913. *Namute.* A medium-sized greenish-yellow variety with a brown hilum; used as boiled beans and also for sprouts.

82572. No. 1914. *Hinkon.* A medium-sized yellow variety with a pale hilum; used as boiled beans and also boiled for cattle feed.

82573. No. 1915. *Pankute.* A medium-large, nearly round, yellow variety with a light-brown hilum; used for bean curd, miso, and soy sauce.

82574. No. 1916. *Chosenkon.* A sample of mixed yellow beans of medium-large size and with variations in the color of the hilum; used as boiled beans and also for miso, soy sauce, and bean curd.

82575. No. 1917. *Pakukon.* A mixed sample of yellow varieties varying in the size and shape of the seeds and in the color of the hilum; used for miso, soy sauce, and bean curd.

82576. No. 1918. *Urukon.* A mixed sample of yellow varieties varying from medium small to medium sized; used when boiled for cattle feed.

82577. No. 1919. *Kirukon.* A medium-sized brown variety with a small mixture of yellow beans; used when boiled for cattle feed.

82578. No. 1920. *Pakute.* A medium-sized yellow variety varying in the color of the hilum; used as boiled beans and also in making miso and soy sauce.

82579 to 82598. From Keijo, November, 1929.

82579. No. 1922. *Komujonkon.* A medium-sized black variety, used in making soybean confections.

82580. No. 2002. *Hinkon.* A medium-sized oval yellow variety with a pale hilum and a slight mixture of beans with brown hilums; used in making natto, bean curd, soy sauce, and miso.

82509 to 82598—Continued.

82581. No. 2003. *Chontekon.* A medium-large, nearly round, green variety with a light slate-black hilum; used as boiled beans.

82582. No. 2004. *Komujankon.* A medium-sized, somewhat flattened black variety, used in making soybean confections, especially candied beans.

82583. No. 2005. *Oriarukon.* A medium-sized greenish-yellow variety with a black hilum; used when boiled as cattle feed.

82584. No. 2006. *Kirugunte.* A medium-small, nearly round, yellow variety with a brown hilum; used for sprouts.

82585. No. 2008. *Pakute.* A mixed sample of yellow seeds varying from medium to very large; used in making miso and soy sauce, and boiled as cattle feed.

82586. No. 2009. *Purunkon.* A medium-sized green variety with a light-brown hilum; used as boiled beans.

82587. No. 2010. *Kirugunkon.* A very small, nearly round, yellow variety with a pale hilum; used for bean sprouts.

82588. No. 2011. *Kahei.* A medium-sized oval glossy yellow variety with a brown hilum; especially good in making a high grade of natto, and also used for soy sauce and bean curd.

82589. No. 2012. *Kirugunte.* A very small round yellow variety with a pale hilum; used for sprouts.

82590. No. 2013. *Tetsukon.* A medium-large, yellowish-brown, slightly flattened variety, used as cattle feed when boiled.

82591. No. 2014. *Papute.* A large nearly round, yellow variety with a pale hilum; used in making miso and soy sauce, and also boiled for cattle feed.

82592. No. 2016. *Funkon.* A medium to medium-large oval yellow variety with a pale hilum, and a slight mixture of beans with a brown hilum; used as boiled beans and also as cattle feed.

82593. No. 2018. *Futti.* A medium to medium-large black variety, used in making soybean confections, especially candied beans.

82594. No. 2019. *Chonte.* A medium-large, green, nearly round variety with a green germ; used as boiled beans.

82595. No. 2020. *Chimnikon.* A medium-sized oval glossy yellow variety with the color of the hilum varying from pale brown to a darker brown; used in making bean curd, soy sauce, and natto.

82596. No. 2021. *Ajukarukon.* A medium-sized, slightly flattened black and white variety, used in making soybean confections.

82597. No. 2022. *Chonte.* A medium-large oval green variety with a brown hilum; used as boiled beans.

82598. No. 2023. *Kirugunte.* A mixed sample of small, nearly round, yellow varieties with variations in the color of the hilum from pale to black or brown; used for sprouts.

82599. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

From Chosen, Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929.

No. 2007. Obtained in the Chosen grain market at Keijo, November 21, 1929. *Tonfu.* An edible variety with medium-small white seeds with a brown eye.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 102

Washington, D. C. ▼ Issued September, 1931

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1930 (Nos. 82600–86755)

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INTRODUCTORY STATEMENT

This present inventory of materials received between January 1 and March 31, 1930 (Nos. 82600 to 86755), is made up mainly of seeds and plants collected by the bureau's agricultural explorers.

P. H. Dorsett and W. J. Morse during this period sent from the Orient more than 1,700 strains of soybeans, besides a collection of Japanese persimmon varieties (*Diospyros kaki*, Nos. 83707–83711, 83783–83792, 85698–85722, 85811–85834), and smaller quantities of forage crops and ornamentals.

From Persia and Turkestan W. E. Whitehouse sent in a collection of seeds and scions of peaches (*Amygdalus* spp., No. 82646–82648, 86284–86302), plums (*Prunus* spp., 82672–82679, 83751, 83752, 86380–86390), and pistache (*Pistacia vera*, Nos. 83734–83750, 85906–85928, 86368–86379). He also sent in a collection of watermelon seeds (*Citrullus vulgaris*, Nos. 82560–82569, 86311–86321), and melon seeds (*Cucumis melo*, Nos. 86323–86338), which will be used for experimental purposes.

R. K. Beattie sent in his last shipment of Japanese chestnuts (*Castanea crenata*, Nos. 85767–85804, 85969–85979) before leaving the Orient.

H. L. Westover, who during this period has been traveling in Turkestan and Europe, sent in many forage crops, including vicias, trifoliums, and over 250 strains of alfalfa (*Medicago sativa*, Nos. 82601–82626, 83728, 84337–84451, 85997, 85998, 86522–86664).

A collection of oats and barley (Nos. 86176–86210) has been received from Prof. A. Kol, Chief, Institute of Applied Botany, Leningrad, Union of Socialistic Soviet Republics. A large collection of barley and wheat (Nos. 82681–83682) was received from the University of Nanking, China, and will be used by the department specialists in their experimental work.

J. F. Rock, traveling in the Orient under the direction of the National Geographic Society, Washington, D. C., has sent in a large collection of ornamentals including primulas, cotoneasters, enkianthus, gentians, loniceras, and meconopsis, as well as 165 rhododendrons.

Dr. H. S. Fawcett, of the University of California, during this period has been in the Mediterranean region and from there has sent seeds and scions of *Citrus* spp., *Prunus* spp., *Amygdalus persica*, and *Phoenix reclinata*, hoping through these introductions to contribute to the solution of horticultural problems in California.

From Darjiling, India, the curator of the Lloyd Botanic Garden presented a collection of seeds of ornamentals and trees (Nos. 86665–86692) adapted for growing in the southern United States.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., April 30, 1931.

INVENTORY[1]

82600. MANICARIA SACCIFERA Gaertn. Phoenicaceae. Palm.

From J. E. Higgins, Director, Plant Introduction Gardens, Summit, Canal Zone. Received January 2, 1930.

Unlike most other palms, this Brazilian species has entire leaves, which become about 30 feet in length and 5 feet in width. The trunk is erect, ringed, and unarmed, and is 15 to 20 feet high. The natives of Brazil use the immense leaves of this palm for thatching their huts and also for making a coarse cloth.

For previous introduction see No. 61629.

82601 to 82627.

From France. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received January 2, 1930.

82601 to 82626. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

82601. From the farm of Roux Ripert, southeast of Avignon; 1928 crop.

82602. November 27, 1929. From the village of Benet, border of marshes, Niort.

82603. November 27, 1929. From Maurice Boissinot, dealer, Thouars.

82604. November 27, 1929. From marshlands west of Niort and south of Fontenay, at the village of Vix.

82605. November 26, 1929. From Bernard Pamfroux, St. Maixent.

82606. November 25, 1929. From northwest of the village of Turenne.

82607. November 26, 1929. From the village of St. Jean d'Angely.

82608. November 27, 1929. From Pathenay. Local production.

82609. November 27, 1929. From Thouars. Local production.

82601 to 82627—Continued.

82610. November 26, 1929. From the village of Pamproux.

82611. November 26, 1929. Locally grown seed from the 1928 crop obtained in Niort.

82612. November 27, 1929. From Fontenay le Comte.

82613. From Mirabel, northeast of Avignon; 1929 crop.

82614. From the farm of Roux Ribert, Mouries; 1929 crop.

82615. From the vicinity of Entrechaux, northeast of Avignon; 1929 crop.

82616. From St. Saturnin les Avignon; 1929 crop.

82617. From Piegou, northeast of Avignon; 1929 crop.

82618. From the farm of Roux Ripert, southeast of Avignon; 1929 crop.

82619. From Figeae.

82620. November 26, 1929. From Lusignant.

82621. November 27, 1929. From the vicinity of Foussais.

82622. November 25, 1929. From the village of Turrenne.

82623. November 23, 1929. From Boussoe.

82624. November 23, 1929. Commercial mixture from Figeae.

82625. November 23, 1929. From Assier.

82626. November 23, 1929. From Camboulet.

82627. TRIFOLIUM PRATENSE L. Fabaceae. Red clover.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

82628 and 82629.

From Bogotá, Colombia. Seeds presented by Hernando Villa. Received January 2, 1930.

82628. PASSIFLORA MIXTA L. f. Passifloraceae.

This is the common curuba sold in the markets of Bogotá, Colombia.

82629. PHYSALIS PERUVIANA L. **Peruvian groundcherry.**

A small shrub which produces a very tasteful fruit which can be served in sirup.

82630. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 30, 1930.

No. 3076. Nodamachi, January 8, 1930. This wheat, said to have been imported from Canada, is roasted and used in the manufacture of soy sauce. One firm uses 20,000 bushels of wheat and 20,000 bushels of soybeans yearly for this purpose.

82631. EUTERPE sp. Phoenicaceae. **Palm.**

From Cali, Colombia. Seeds presented by M. J. Rivero. Received January 4, 1930.

The Euterpes are slender erect spineless palms of graceful habit, with feathery pinnate foliage.

82632 to 82636.

From Hanoi, Indo-China. Seeds presented by Mr. Poilane, Institut des Recherches Agronomique de l'Indochine. Received January 2, 1930.

82632 to 822634. CASTANOPSIS spp. Fagaceae.

82632. CASTANOPSIS sp.

82633. CASTANOPSIS sp.

82634. CASTANOPSIS sp.

82635 and 82636. PYRUS spp. Malaceae. **Pear.**

82635. PYRUS sp.

82636. PYRUS sp.

82637 to 82640.

From Doleib Hill, Nalakal, Anglo-Egyptian Sudan, Africa. Seeds presented by H. B. Gephardt, American Mission. Received January 2, 1930.

82637. BRACHIARIA sp. Poaceae. **Grass.**

A biennial or perennial grass with thick juicy stems 6 to 7 feet tall; grows in heavy clayey land. Seeds are eaten by the natives, and the plant is highly palatable to cattle.

82638. ERIOCHLOA ACROTRICHA (Steud.) Hack. Poaceae. **Grass.**

Akwath grass. This grows in water in heavy soil; the stems are 1 to 2 feet tall. Natives eat the seeds, and the plant is said to be very palatable for cattle.

82639. PANICUM sp. Poaceae. **Grass.**

Aginye grass. This grows to a height of 3 or 4 feet in dry clay soil. Seeds eaten by the natives; plants palatable for cattle.

82637 to 82640—Continued.

82640. SORGHUM LANCEOLATUM Stapf. Poaceae. **Grass.**

Abarro grass. Stems 7 to 9 feet tall. Grows in open soil on river banks. Seeds eaten by natives; plants palatable for cattle.

82641. GREVILLEA LEUCOPTERIS Meisn. Proteaceae.

From Santa Monica, Calif. Seeds presented by Hugh Evans. Received January 4, 1930.

A large evergreen shrub, 4 to 8 feet high, with handsome pinnate, pale-green foliage, and many-flowered loose terminal racemes of pure-white flowers. These racemes are much larger than those of *G. banksii*.

82642 and 82643.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received January 6, 1930.

82642. RANDIA sp. Rubiaceae.

Madododo. The edible fruit, which is considered delicious by the natives, seems to have remarkable keeping qualities.

82643. (Undetermined.)

A woody plant which grows in the Mount Silinda Forest. The very attractive white flowers are trumpet-shaped, the tube being 4 or 5 inches in length. In the forest it is inclined to produce rather trailing branches, but on the ground it grows as a compact bush.

82644 to 82663.

From the Union of Socialistic Soviet Republics. Seeds collected by W. E. Whitehouse, agricultural explorer, Bureau of Plant Industry. Received January 6, 1930.

82644. ALLIUM CEPA L. Liliaceae. **Onion.**

No. 22. August 22, 1929. Vicinity of Alma Ata, Turkestan.

82645. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

No. 4. August 13, 1929. Tashkent, Turkestan. From wild trees near Ferghana.

82646 to 82648. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

82646. No. 1. September 4, 1929. Andijan, Turkestan. Flesh yellow, red around stone, freestone, quality good; rarely found on market.

82647. No. 1. Tashkent. Fruits pale greenish yellow, covered with deep orange-red over about one-third; of irregular shape; inclined to taper off to a fairly pronounced apex, with a shallow suture; diameter 2 to 3 inches; flesh yellow; stained red around pit; freestone. Matures August 10 to 15. A peach of good quality, closely resembling the Elberta.

82648. (No number.) Andijan Turkestan. Grown locally. Flesh pale yellow to cream; tinged with red around pit, freestone, of good quality.

82644 to 82663—Continued.

82649. BRASSICA OLERACEA CAPITATA L. Brassicaceae. **Cabbage.**

No. 19. Tashkent, Turkestan. Grown locally.

82650 to 82654. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

82650. No. 20. August 12, 1929. Tashkent, Turkestan. A locally grown early watermelon about a foot long and 9 inches in diameter. Skin pale green with slightly darker, somewhat subdued stripes. Flesh pink, of fine texture, with a medium rind. An attractive melon of excellent quality.

82651. No. 23. August 22, 1929. Alma Ata, Turkestan. An early, round melon of medium size, grown locally; light green with prominent dark-green stripes; flesh pink; of good quality.

82652. No. 24. August 22, 1929. Alma Ata, Turkestan. A light green, early, round melon, grown locally; flesh red; quality fair to poor.

82653. No. 25. August 22, 1929. Alma Ata, Turkestan. A dark green locally grown round melon with red flesh of good quality.

82654. No. 26. August 22, 1929. Alma Ata, Turkestan. A long narrow dark green locally grown melon; flesh red; quality fair.

82655 to 82659. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

82655. No. 6. August 10, 1929. Kasalinsk, Turkestan. Yellowish bronze with dark-green stripes about one-fourth inch wide. Surface irregularly covered with numerous dark greenish bronze dots, giving a speckled appearance. Medium size, roundish shape, somewhat inclined to oblong. Flesh creamy yellow; quality good.

82656. No. 7. August 10, 1929. Kasalinsk, Turkestan. Color pale yellowish green, dots scattered, numerous, dark green; stripes dark green; medium to small size, but fairly uniform; shape round, slightly oblate; flesh of fine texture, cream color, juicy; of good quality but a poor shipper.

82657. No. 8. August 10, 1929. Orenburg, Turkestan. Shape long and narrow; color pale yellow; size medium to large; quality good.

82658. No. 19. August 12, 1929. Plant Breeding Station, Tashkent, Turkestan. Local variety; shape long and narrow; skin with gray netting; flesh creamy white; of very good flavor.

82659. No. 29. August 23, 1929. Alma Ata, Turkestan. A melon of good quality.

82660. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

No. 21. August 22, 1929. Alma Ata, Turkestan.

82661 to 82663. PHASEOLUS spp. Fabaceae.

August 7, 1929. Obtained from the Saratov Experiment Station.

82644 to 82663—Continued.

82661. PHASEOLUS COCCINEUS L. **Scarlet runner.**

No. 17. *Lopata.* A white bean, originally from Verones Station, Institute of Applied Botany and Plant Breeding, Leningrad.

82662 and 82663. PHASEOLUS VULGARIS L. **Common bean.**

82662. *Ukrainka.* A variety grown locally, obtained from a Russian peasant.

82663. No. 18. A yellow bean, pure line No. 43621 of the Plant Breeding Department, Saratov Experiment Station.

82664 to 82668.

From Algeria. Seeds and scions collected by Dr. H. S. Fawcett, University of California. Received February 20, 1930.

82664. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

No. 53. El Galea Oasis, January 30, 1930. Scions of a mandarin orange which is especially large and fine looking. The fruit is flat with a high color and seems different from varieties grown in California.

82665. GOSSYPIUM NANKING SOUDANENSIS Watt. Malvaceae. **Cotton.**

No. 56. El Galea Oasis, January 30, 1930. An indigenous cotton grown by the natives.

For previous introduction see No. 51949.

82666. PHOENIX RECLINATA Jacq. Phoenicaceae. **Senegal date palm.**

No. 57. February 4, 1930. A date palm 25 or more feet tall, which has bright-green pinnate leaves with rigid leaflets. Native to tropical Africa.

For previous introduction see No. 75224.

82667. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. 51. *Mesh-mesh.* Laghouat Oasis, January 26, 1930. Scions from a large healthy seedling tree, a branch of which was still holding its leaves on January 28, 1930.

82668. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. 52. *Mesh-mesh.* January 30, 1930. El Galea Oasis E., 1,000 kilometers south of Algiers. Scions from seedling trees, doing well in a climate probably more severe than that of Indio, Calif.

82669 and 82670.

From Manila, Philippine Islands. Seeds presented by P. J. Wester. Received February 27, 1930.

82669. EVODIA RIDLEYI Hochr. Rutaceae.

A small shrub, 1 to 2 feet high, with opposite leaves having linear-lanceolate leaflets with undulate margins and panicles of small white flowers, followed by 2-lobed to 4-lobed greenish fruits inclosing small black seeds. Native to the Malayan region.

82670. HIBISCUS PUNGENS Roxb. Malvaceae. **Rosemallow.**

An erect, bristly herbaceous perennial, native to the tropical Himalayas, with

82669 and 82670—Continued.

roundish heart-shaped, deeply lobed leaves 5 to 8 inches long and yellow flowers with purple centers 5 inches in diameter.

For previous introduction see No. 68338.

82671. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Bombay, India. Seeds presented by Dr. S. G. Williams, through the American Consulate, Bombay. Received February 28, 1930.

Kabul. A melon which grows as large as a watermelon and is similar in flavor to the Honey Dew.

82672 to 82680.

From the Union of Socialistic Soviet Republics. Seeds collected by W. E. Whitehouse, agricultural explorer, Bureau of Plant Industry. Received January 6, 1930.

82672 to 82677. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Collected in the mountains near Alma Ata, Turkestan. Grows wild and withstands low temperatures which kill out the European varieties of apricots grown in the orchards close to Alma Ata.

82672. No. 11. Collected August 22, 1929.

82673. No. 12. Collected August 24, 1929.

82674. No. 13. Collected August 24, 1929.

82675. No. 14. Collected August 24, 1929.

82676. No. 15. Collected August 24, 1929.

82677. No. 16. Collected August 22, 1929, near Lake Issyk.

82678 and 82679. PRUNUS CERASUS L. Amygdalaceae. **Sour cherry.**

82678. No. 9. Volga River, above Saratov. A local strain of a wild form.

82679. No. 10. Tolovaya, Vorenez district. A seedling sour cherry.

82680. PYRUS HETEROPHYLLA Regel and Schmalh. Malaceae. **Pear.**

From Alampa Si, a pass in the mountains west of Dzhelalabad, Turkestan. Wild pear.

82681 to 83682.

From Nanking, China. Seeds presented by the University of Nanking. Received September 16, 1929. Numbered in January, 1930.

82681 to 82688. HORDEUM spp. Poaceae. **Six-rowed barley.**

82681. HORDEUM VULGARE PALLIDUM Seringe.

No. 5085. From Nanhsuchow.

82682. HORDEUM VULGARE TRIFURCATUM (Schlecht.) Beaven.

No. 5086. From Kweiteh.

82683. HORDEUM VULGARE HORSFORDIANUM Wittmack.

No. 5087. From Kweiteh.

82681 to 83682—Continued.

82684 to 82686. HORDEUM VULGARE PALLIDUM Seringe.

From Nanhsuchow.

82684. No. 5088.

82685. No. 5089.

82686. No. 5090.

82687. HORDEUM VULGARE COELESTE L. No. 5091. From Nanhsuchow.

82688. HORDEUM VULGARE PALLIDUM Seringe.

No. 5092. From Nanhsuchow.

82689 to 83682. TRITICUM spp. Poaceae.

82689 to 83260. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

82689. A 1.	82729. A 47.
82690. A 2.	82730. A 48.
82691. A 4.	82731. A 49.
82692. A 5.	82732. A 50.
82693. A 7.	82733. A 51.
82694. A 8.	82734. A 54.
82695. A 10.	82735. A 55.
82696. A 11.	82736. A 56.
82697. A 12.	82737. A 57.
82698. A 13.	82738. A 58.
82699. A 14.	82739. A 60.
82700. A 15.	82740. A 61.
82701. A 16.	82741. A 62.
82702. A 17.	82742. A 63.
82703. A 18.	82743. A 64.
82704. A 19.	82744. A 65.
82705. A 20.	82745. A 66.
82706. A 22.	82746. A 68 (a)
82707. A 23.	82747. A 68 (b)
82708. A 24.	82748. A 69.
82709. A 25.	82749. A 70.
82710. A 26.	82750. A 71.
82711. A 27.	82751. A 73.
82712. A 28.	82752. A 74.
82713. A 29.	82753. A 75.
82714. A 30.	82754. A 78.
82715. A 31.	82755. A 80.
82716. A 32.	82756. A 81.
82717. A 33.	82757. A 82.
82718. A 34.	82758. A 83.
82719. A 35.	82759. A 84.
82720. A 36.	82760. A 85.
82721. A 37.	82761. A 86.
82722. A 38.	82762. A 87.
82723. A 39.	82763. A 88.
82724. A 40.	82764. A 89.
82725. A 41.	82765. A 90.
82726. A 42.	82766. A 91.
82727. A 44.	82767. A 93.
82728. A 45.	82768. A 95.

82681 to 83682—Continued.

82769. A 96.
82770. A 97.
82771. A 98.
82772. A 99.
82773. A 101.
82774. A 102.
82775. A 103.
82776. A 104 (a).
82777. A 104 (b).
82778. A 105.
82779. A 106.
82780. A 108.
82781. A 109.
82782. A 121.
82783. A 122.
82784. A 123.
82785. A 124.
82786. A 125.
82787. A 126.
82788. A 128.
82789. B 1 (a).
82790. B 1 (b) 1.
82791. B 1 (b) 2.
82792. B 2 (a).
82793. B 2 (b) 1.
82794. B 2 (b) 2.
82795. B 2 (b) 3.
82796. B 2 (b) 4.
82797. B 3 (a).
82798. B 3 (b).
82799. B 3 (c).
82800. B 4 (a).
82801. B 4 (b).
82802. B 5.
82803. B 6 (a).
82804. B 6 (b) 1.
82805. B 6 (b) 2.
82806. B 6 (b) 3.
82807. B 7 (a).
82808. B 7 (b).
82809. B 8.
82810. B 9.
82811. B 10.
82812. B 11 (a).
82813. B 11 (b).
82814. B 12.
82815. B 13.
82816. B 14.
82817. B 15 (a).
82818. B 15 (b).
82819. B 16.
82820. B. 17.
82821. B 18.
82822. B 19 (a).
82823. B 19 (b).
82824. B 20.
82825. B 21.
82826. B 22.
82827. B 23.
82828. B 24.
82829. B 25.
82830. B 26.
82831. B 27 (a).
82832. B 27 (b).
82833. B 28 (a).
82834. B 28 (b).
82835. B 29.
82836. B 30.
82837. B 31 (b).
82838. B 32 (a).
82839. B 32 (b) 1.
82840. B 32 (b) 2.
82841. B 33.
82842. B 34.
82843. B 35.
82844. B 36.
82845. B 37 (a).
82846. B 37 (b).
82847. B 38 (a).
82848. B 38 (b).
82849. B 39.
82850. B 40.
82851. B 41.
82852. B 42.
82853. B 43.
82854. B 44.
82855. B 45.
82856. B 46.
82857. B 47.
82858. B 48.
82859. B 49.
82860. B 53.
82861. B 54.
82862. B 55.
82863. B 56.
82864. B 57.
82865. B 58.
82866. B 59.
82867. B 60.
82868. B 61.
82869. B 62.
82870. B 63.
82871. B 64.
82872. B 65.
82873. B 66.
82874. B 67.
82875. B 68.
82876. B 72.
82877. B 76.
82878. C 1.
82879. C 2 (a).
82880. C 2 (b).
82881. C 3 (a).
82882. C 3 (b).

82681 to 83682—Continued.

82883. C 4 (a).
82884. C 4 (b).
82885. C 5 (a).
82886. C 5 (b).
82887. C 6 (a).
82888. C 6 (b).
82889. C 7.
82890. C 8 (a).
82891. C 8 (b).
82892. C 9.
82893. C 10.
82894. C 11.
82895. C 12.
82896. C 13.
82897. C 14.
82898. C 15.
82899. C 16.
82900. C 17.
82901. C 18.
82902. C 21.
82903. C 23.
82904. C 24.
82905. C 25.
82906. C 26.
82907. C 27.
82908. C 28.
82909. C 29.
82910. C 30.
82911. C 31.
82912. C 32.
82913. C 33.
82914. C 34.
82915. C 35.
82916. C 36.
82917. C 37 (a).
82918. C 37 (b).
82919. C 38.
82920. C 39.
82921. C 41.
82922. C 42.
82923. C 43.
82924. C 44.
82925. C 45.
82926. C 46.
82927. C 48.
82928. C 49.
82929. C 50.
82930. C 51.
82931. C 52.
82932. C 53.
82933. C 54.
82934. C 55.
82935. C 56.
82936. C 57.
82937. C 58.
82938. C 59.
82939. C 60.
82940. C 61.
82941. C 62.
82942. C 63.
82943. C 64.
82944. C 65.
82945. C 66.
82946. C 67.
82947. C 68.
82948. C 69.
82949. C 70.
82950. C 71.
82951. C 72.
82952. C 73.
82953. C 74 (a).
82954. C 74 (b).
82955. C 75.
82956. C 78.
82957. C 79(a).
82958. C 79 (b).
82959. C 80.
82960. C 81.
82961. C 82.
82962. C 83.
82963. C 84.
82964. C 85.
82965. C 86.
82966. C 87.
82967. C 88.
82968. C 89.
82969. C 90.
82970. C 92.
82971. C 94.
82972. C 95 (a).
82973. C 95 (b).
82974. C 96.
82975. C 97 (a).
82976. C 97 (b).
82977. C 98.
82978. C 99.
82979. C 100.
82980. C 101.
82981. C 102.
82982. C 103.
82983. C 104.
82984. C 105.
82985. C 106.
82986. C 108.

82681 to 83682—Continued.

82987. C 109 (a).
82988. C 109 (b).
82989. C 110.
82990. C 111.
82991. C 116.
82992. C 117.
82993. C 118.
82994. D 1 (a).
82995. D 1 (b) 1.
82996. D 1 (b) 2.
82997. D 1 (c).
82998. D 2 (a).
82999. D 2 (b).
83000. D 3 (a).
83001. D 3 (b).
83002. D 4.
83003. D 5.
83004. D 6 (a).
83005. D 6 (b).
83006. D 7.
83007. D 8.
83008. D 9.
83009. D 10.
83010. D 11.
83011. D 12.
83012. D 13.
83013. D 14.
83014. D 15 (a).
83015. D 15 (b).
83016. D 17.
83017. D 18.
83018. D 19.
83019. D 20.
83020. D 21.
83021. D 22.
83022. D 23 (a).
83023. D 23 (b).
83024. D 23 (c).
83025. D 24.
83026. D 25.
83027. D 26.
83028. D 27.
83029. D 28 (a).
83030. D 28 (b).
83031. D 29.
83032. D 30.
83033. D 31.
83034. D 33 (a).
83035. D 33 (b).
83036. D 34.
83037. D 35 (a).
83038. D 35 (b).
83039. D 35 (c).
83040. D 36.
83041. D 37.
83042. D 38.
83043. D 39.
83044. D 40.
83045. D 41.
83046. D 42.
83047. D 43.
83048. D 44.
83049. D 45.
83050. D 46.
83051. D 47.
83052. D 48.
83053. D 49.
83054. D 50.
83055. D 51.
83056. D 52.
83057. D 53.
83058. D 54.
83059. D 55.
83060. D 56.
83061. D 57.
83062. D 58 (a).
83063. D 58 (b).
83064. D 59.
83065. D 60.
83066. D 62.
83067. D 63.
83068. D 64.
83069. D 65.
83070. D 66.
83071. D 67.
83072. D 68.
83073. D 69.
83074. D 70.
83075. D 71.
83076. D 73.
83077. D 74.
83078. D 76.
83079. D 77.
83080. D 78.
83081. D 79.
83082. D 80.
83083. D 81.
83084. D 84.
83085. D 88.
83086. D 89.
83087. D 90.
83088. D 91.
83089. D 92.
83090. D 93.

82681 to 83682—Continued.

83091. D 94.
83092. D 95.
83093. D 96.
83094. D 97.
83095. D 98.
83096. D 101.
83097. D 102.
83098. D 103.
83099. D 104.
83100. D 105.
83101. D 106.
83102. D 107.
83103. D 108.
83104. D 109.
83105. D 111.
83106. D 112.
83107. D 113.
83108. D 116 (spring).
83109. D 117.
83110. D 118.
83111. D 119.
83112. D 121.
83113. D 122.
83114. D 123.
83115. D 124.
83116. D 125.
83117. D 126.
83118. D 127 (a).
83119. D 127 (b).
83120. D 127 (c).
83121. D 128.
83122. D 129 (a).
83123. D 129 (b).
83124. D 130.
83125. D 131 (a).
83126. D 131 (b).
83127. D 132 (a).
83128. D 132 (b).
83129. D 133.
83130. E 1.
83131. E 1 (spring).
83132. E 2.
83133. E 3.
83134. E 4.
83135. E 5.
83136. E 6.
83137. E 7.
83138. E 8.
83139. E 9.
83140. E 10.
83141. E 11.
83142. E 11 (a).
83143. E 12.
83144. E 13.
83145. E 14.
83146. E 15.
83147. E 16.
83148. E 17.
83149. E 18.
83150. E 19.
83151. E 20.
83152. E 21 (a).
83153. E 21 (b).
83154. E 22.
83155. E 24.
83156. E 25 (a).
83157. E 25 (b).
83158. E 26 (spring).
83159. E 27.
83160. E 28.
83161. E 29.
83162. E 31.
83163. E 32.
83164. E 33 (spring).
83165. E 34.
83166. E 35.
83167. E 36.
83168. E 37.
83169. E 38.
83170. E 39.
83171. E 40.
83172. E 41.
83173. E 42.
83174. E 43.
83175. E 44.
83176. E 45.
83177. E 48.
83178. E 49.
83179. E 50.
83180. E 51.
83181. E 52.
83182. E 53.
83183. E 54.
83184. E 55.
83185. E 56.
83186. E 58.
83187. E 59.
83188. E 60.
83189. E 61.
83190. E 62.
83191. E 63.

82681 to 83682—Continued.

83192. E 64.
83193. E 65.
83194. E 66.
83195. E 67.
83196. E 68.
83197. E 69.
83198. E 70.
83199. E 71.
83200. E 72.
83201. E 73.
83202. E 74.
83203. E 75.
83204. E 76.
83205. E 77.
83206. E 78.
83207. E 79.
83208. E 80.
83209. E 81.
83210. E 83 (a).
83211. E 83 (b).
83212. E 84.
83213. E 85.
83214. E 86 (spring).
83215. E 87.
83216. E 88.
83217. E 89.
83218. F 1 (a).
83219. F 1 (b).
83220. F 2 (a).
83221. F 2 (b) 1.
83222. F 2 (b) 2.
83223. F 2 (b) 3.
83224. F 3 (a).
83225. F 3 (b) 1.
83226. F 3 (b) 2.
83227. F 4.
83228. F 5.
83229. F 6.
83230. F 7.
83231. F 8.
83232. F 9.
83233. F 10.
83234. F 11.
83235. F 12.
83236. F 13.
83237. F 14.
83238. F 15.
83239. F 16.
83240. F 17 (a).
83241. F 17 (b).
83242. F 18.
83243. F 19.
83244. F 20.
83245. F 21.
83246. F 22.
83247. F 23.
83248. F 24.
83249. F 25.
83250. F 26.
83251. F 27.
83252. F 28.
83253. F 29.
83254. F 30.
83255. F 31.
83256. F 32.
83257. F 33.
83258. F 34 (a).
83259. F 34 (b).
83260. F 34 (c).

83261. TRITICUM TURGIDUM L. Poulard wheat.

F 35 (a) 1.

83262. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

F 35 (b).

83263. TRITICUM DURUM × POLONICUM. Hybrid wheat.

F 36 (a).

83264 to 83310. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83264. F 36 (b).
83265. F 37.
83266. F 38.
83267. F 82.
83268. F 87 (a).
83269. G 1.
83270. G 2 (a) 1.
83271. G 2 (a) 2.
83272. G 2 (b).
83273. G 3.
83274. G 4.
83275. G 6 (a).
83276. G 6 (b) 1.
83277. G 6 (b) 2.

82681 to 83682—Continued.

83278. G 7.
83279. G 8.
83280. G 9.
83281. G 10.
83282. G 11.
83283. G 12.
83284. G 13.
83285. G 14.
83286. G 15.
83287. G 16.
83288. G 17.
83289. G 18.
83290. G 19.
83291. G 21.
83292. G 22.
83293. G 23 (a).
83294. G 23 (b).
83295. G 24.
83296. G 25.
83297. G 26.
83298. G 27.
83299. G 28.
83300. G 29.
83301. G 30.
83302. G 31.
83303. G 32.
83304. G 33.
83305. G 35.
83306. G 36.
83307. G 37.
83308. G 38.
83309. H 1 (a).
83310. H 1 (b).

83311. TRITICUM DURUM L. Durum wheat.

H 2 (a).

83312. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

H 2 (b).

83313. TRITICUM DURUM L. Durum wheat.

H 3 (a) 1.

83314 to 83318. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83314. H 3 (a) 2.
83315. H 3 (a) 3.
83316. H 3 (b).
83317. H 3 (c) 1.
83318. H 3 (c) 2.

83319. TRITICUM DURUM L. Durum wheat.

H 4 (a).

83320 to 83328. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83320. H 4 (b).
83321. H 4 (c).
83322. H 5 (a).
83323. H 5 (b).
83324. H 6 (a).
83325. H 6 (b).
83326. H 7 (a).
83327. H 7 (b).
83328. H 7 (c).

83329. TRITICUM DURUM L. Durum wheat.

H 8 (a).

83330 to 83340. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83330. H 8 (b).
83331. H 9 (a).
83332. H 9 (b).
83333. H 9 (c).
83334. H 10 (a) 1.
83335. H 10 (a) 2.
83336. H 10 (b).
83337. H 11 (a).
83338. H 11 (b).
83339. H 11 (c).
83340. H 12 (a).

83341. TRITICUM DURUM L. Durum wheat.

H 12 (b).

82681 to 83682—Continued.

83342 to 83357. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83342. H 13 (a) 1.
83343. H 13 (a) 2.
83344. H 13 (b).
83345. H 14.
83346. H 15.
83347. H 16.
83348. H 17.
83349. H 18.
83350. H 19.
83351. H 20.
83352. H 21.
83353. H 22.
83354. H 23.
83355. H 24 (a).
83356. H 24 (b).
83357. H 25.

83358. TRITICUM DURUM L. Durum wheat.

H 26.

83359 to 83370. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83359. H 27.
83360. H 28 (a).
83361. H 28 (b).
83362. H 29.
83363. H 30.
83364. H 31 (a).
83365. H 31 (b).
83366. H 32 (a).
83367. H 32 (b).
83368. H 33.
83369. H 34 (a).
83370. H 34 (b).

83371. TRITICUM DURUM L. Durum wheat.

H 35 (a).

83372 to 83378. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83372. H 35 (b).
83373. H 35 (c).
83374. H 36.
83375. H 37.
83376. H 38.
83377. H 39 (a).
83378. H 39 (b).

83379. TRITICUM DURUM L. Durum wheat.

H 40 (a).

83380 to 83409. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83380. H 40 (b).
83381. H 41.
83382. H 42.
83383. H 43 (a).
83384. H 43 (b).
83385. H 44.
83386. I 1 (a).
83387. I 1 (b).
83388. I 1 (c).
83389. I 2 (a).
83390. I 2 (b).
83391. I 3 (a).
83392. I 3 (b).
83393. I 4 (a).
83394. I 4 (b).
83395. I 5.
83396. I 6.
83397. I 7.
83398. I 8 (spring).
83399. I 9.
83400. I 10.
83401. I 11.
83402. I 12.
83403. I 13.
83404. I 14.
83405. I 15.
83406. I 16.
83407. I 17.
83408. I 18.
83409. I 19.

83410. TRITICUM DURUM L. Durum wheat.

I 20.

82681 to 83682—Continued.

83411 to 83537. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83411. I 21.
83412. I 22.
83413. I 23.
83414. I 24.
83415. I 25.
83416. I 26.
83417. I 27.
83418. I 28.
83419. I 29 (1).
83420. I 29 (2).
83421. I 30.
83422. I 31.
83423. I 32.
83424. I 33.
83425. I 34.
83426. I 35.
83427. I 36.
83428. I 37.
83429. I 38.
83430. I 39.
83431. I 40.
83432. I 41.
83433. I 42.
83434. I 43.
83435. I 44.
83436. I 45.
83437. I 46.
83438. I 47.
83439. I 48.
83440. I 49.
83441. I 50.
83442. I 51.
83443. I 56.
83444. I 57 (a).
83445. I 57 (b).
83446. I 58.
83447. J 1 (a).
83448. J 1 (b) 1.
83449. J 1 (b) 2.
83450. J 1 (b) 3.
83451. J 2 (a).
83452. J 2 (b).
83453. J 3 (a).
83454. J 3 (b).
83455. J 4.
83456. J 5.
83457. J 7.
83458. J 8 (a).
83459. J 8 (b).
83460. J 8(c).
83461. J 9.
83462. J 10 (a).
83463. J 10 (b).
83464. J 10 (c).
83465. J 11.
83466. J 12.
83467. J 13.
83468. J 14.
83469. J 15.
83470. J 16.
83471. J 17.
83472. J 18.
83473. J 19 (a).
83474. J 19 (b).
83475. J 20.
83476. J 21.
83477. J 22.
83478. J 23.
83479. J 24 (a).
83480. J 24 (b).
83481. J 25.
83482. J 26.
83483. J 27 (a).
83504. K 10 (a).
83484. J 27 (b).
83485. J 28.
83486. K 1 (a).
83487. K 1 (b).
83488. K 2 (a).
83489. K 2 (b) 1.
83490. K 3 (a) 1.
83491. K 3 (a) 2.
83492. K 3 (b).
83493. K 4 (a).
83494. K 4 (b).
83495. K 5(a).
83496. K 5 (b).
83497. K 6 (a).
83498. K 6 (b).
83499. K 7 (a).
83500. K 7 (b).
83501. K 8 (a).
83502. K 8 (b).
83503. K 9.
83505. K 10 (b).
83506. K 11.
83507. K 12.
83508. K 13.
83509. K 14 (a).
83510. K 14 (b).

82681 to 83682—Continued.

83511. K 15.
83512. K 17.
83513. K 18.
83514. L 1 (a).
83515. L 1 (b).
83516. L 2 (1).
83517. L 2 (a).
83518. L 3 (a).
83519. L 3 (b).
83520. L 4.
83521. L 5.
83522. L 6.
83523. L 8.
83524. L 9.
83525. L 10.
83526. L 11.
83527. L 12.
83528. L 13.
83529. L 14.
83530. L 15.
83531. L 16.
83532. L 17.
83533. M 4.
83534. M 6.
83535. M 7.
83536. M 8 (early).
83537. M 9.

83538. TRITICUM DURUM L. Durum wheat.

M 11.

83539 to 83557. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83539. M 12.
83540. M 13.
83541. N 1.
83542. N 2.
83543. N 3.
83544. N 4.
83545. N 5 (a).
83546. N 5 (b).
83547. N 6.
83548. N 8.
83549. N 9.
83550. N 10 (a).
83551. N 10 (b).
83552. O 1 (a).
83553. O 1 (b).
83554. O 2 (a).
83555. O 2 (b).
83556. O 3 (a) 1.
83557. O 3 (a) 2.

83558. TRITICUM DURUM L. Durum wheat.

O 3 (b).

83559 to 83569. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83559. O 4 (a).
83560. O 4 (b).
83561. O 5 (a) 1.
83562. O 5 (a) 2.
83563. O 5 (b).
83564. O 6 (a).
83565. O 6 (b).
83566. O 6 (c).
83567. O 7 (a).
83568. O 7 (b).
83569. O 8 (a).

83570. TRITICUM DURUM L. Durum wheat.

O 8 (b).

83571 and 83572. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83571. O 9 (a).
83572. O 9 (b).

83573. TRITICUM DURUM L. Durum wheat.

O 10 (a).

83574 to 83655. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

83574. O 10 (b).
83575. O 11 (1).
83576. O 11 (a).
83577. O 12.
83578. P 1 (a).
83579. P 1 (b).
83580. P 2 (a).
83581. P 2 (b).

82681 to 83682—Continued.

83582. P 3 (a).
83583. P 3 (b).
83584. P 4.
83585. Q 1 (a) 1.
83586. Q 1 (a) 2.
83587. Q 1 (b).
83588. Q 2 (a).
83589. Q 2 (b).
83590. Q 3 (a).
83591. Q 3 (b).
83592. Q 4.
83593. Q 5.
83594. Q 6.
83595. Q 7 (1).
83596. Q 7 (2).
83597. Q 8.
83598. Q 9.
83599. R 1.
83600. R 2 (1).
83601. R 2 (2).
83602. S 1.
83603. S 2 (1).
83604. S 2 (a).
83605. S 4.

83606. No. 1. Anhwei.
83607. No. 58. Anhwei.
83608. No. 774. Anhwei.

83609 to 83622. Chekiang.

83609. No. 28.
83610. No. 49.
83611. No. 131.
83612. No. 191.
83613. No. 200.
83614. No. 211.
83615. No. 215.
83616. No. 252.
83617. No. 479.
83618. No. 482.
83619. No. 638.
83620. No. 54.
83621. No. 707.
83622. No. 712.

83623. No. 32. From Chili.
83624. No. 137. From Chili.
83625. No. 236. From Fukien.
83626. No. 237. From Fukien.

83627 to 83632. From Honan.

83627. No. 43.
83628. No. 75.
83629. No. 88.
83630. No. 113.
83631. No. 341.
83632. No. 420.

83633. No. 78. From Hupeh.
83634. No. 706. From Hupeh.
83635. No. 166. From Kiangsi.
83636. No. 256. From Kiangsi.
83637. No. 669. From Kiangsi.
83638. No. 66. From Kiangsu.
83639. From Kiangsu, Taishin.

83640 to 83645. From Kwangsi.

83640. No. 7.
83641. No. 203 (a).
83642. No. 203 (b).
83643. No. 230.
83644. No. 236.
83645. No. 649.

83646. No. 24. From Kweichow.
83647. No. 224. From Kweichow.
83648. No. 601. From Kweichow.
83649. No. 150. From Shansi.
83650. No. 273. From Shansi.
83651. No. 133. From Shantung.
83652. No. 188. From Shantung.

82681 to 83682—Continued.

83653. No. 54. From Shensi.

83654. No. 105. From Shensi.

83655. No. 260. From Shensi.

83656. TRITICUM DURUM L. **Durum wheat.**

(A). From Sinkiang.

83657. TRITICUM TURGIDUM L. **Poulard wheat.**

(B). From Sinkiang.

83658 to 83674. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

83658 to 83663. From Szechwan.

83658. No. 16. **83661.** No. 145.

83659. No. 18. **83662.** No. 291.

83660. No. 117. **83663.** No. 452.

83664. No. 162. From Manchuria.

83665 to 83669. From Yunnan.

83665. No. 187.

83666. No. 189 (a).

83667. No. 189 (b).

83668. No. 507.

83669. No. 556.

83670. No. 13.

83671. No. 14.

83672. No. 18.

83673. No. 129.

83674. No. 438.

83675. TRITICUM DURUM L. **Durum wheat.**

No. 880.

83676 to 83682. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

83676. Fifth plot from end stake.

83677. Sixteenth plot from end stake.

83678. Seventeenth plot from end stake.

83679. Eighteenth plot from end stake.

83680. No. 47.

83681. Unknown.

83682. Unknown.

83683 to 83706. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

From Pusa, India. Seeds presented by F. J. F. Shaw, Officiating Imperial Economic Botanist, Agricultural Research Institute. Received January 3, 1930.

83683. No. 1. **83691.** No. 19.

83684. No. 2. **83692.** No. 20.

83685. No. 6. **83693.** No. 21.

83686. No. 7. **83694.** No. 26.

83687. No. 9. **83695.** No. 27.

83688. No. 10. **83696.** No. 28.

83689. No. 13. **83697.** No. 32.

83690. No. 15. **83698.** No. 34.

83683 to 83706—Continued.

83699. No. 36. **83703.** No. 51.

83700. No. 38. **83704.** No. 63.

83701. No. 40. **83705.** No. 65.

83702. No. 46. **83706.** No. 66.

83707 to 83716.

From Chosen. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 4, 1930.

83707 to 83711. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

December 7, 1929. From the Narusada fruit farm on river-bottom land a short distance from Fusan.

83707. No. 3104. *Fuyu.* No. 5. Fruits large, flattened, golden yellow, and nonastringent. Ripens at Kiho in October.

83708. No. 3105. *Hachiya.* No. 4. The red fruits are pyramidal in shape, with peculiar markings at tip, astringent, and ripen in October or early November.

83709. No. 3108. *Hana Fuyu* or *Yotsundani* (4-lobed). No. 7. Fruits very large, thick, square, nonastringent and reddish golden yellow, but not considered of the best quality.

83710. No. 3112. *Nukuawn.* No. 8. The dark red, nonastringent fruits are large, flat, and square.

83711. No. 3113. A large, long, and square-shaped persimmon of unknown variety. It is nonastringent and ripens medium early.

83712. MALUS sp. Malaceae.

No. 1963. Said to be a wild crab apple.

83713 to 83715. SALIX spp. Salicaceae. **Willow.**

83713. SALIX sp.

No. 1989. An attractive weeping willow in the compound of the Agricultural Society at Tansin. The tree is over 12 inches in diameter and 20 feet high, and the wood seemed very brittle.

83714. SALIX sp.

No. 1998. Keijo, December 3, 1929. A pussy willow which is commonly used in Japanese flower arrangements.

83715. SALIX sp.

No. 1999. Keijo, December 3, 1929. A pussy willow with reddish colored bark, commonly used in Japanese flower arrangements.

83716. VITIS sp. Vitaceae. **Grape.**

No. 1958. November 28, 1929. A wild grape from the Kingo Mountains of Japan; said to produce large bunches of rather large grapes.

83717 and 83718.

From Salisbury, Southern Rhodesia, Africa. Seeds presented by C. S. Cameron, Empire Cotton Growing Corporation, Department of Agriculture.

83717. GOSSYPIUM HIRSUTUM L. Malvaceae. **Upland cotton.**

U 4.

83717 and 83718—Continued.

83718. GOSSYPIUM sp. Malvaceae. **Cotton.**

Cambodia.

83719 to 83723. AVENA spp. Poaceae. **Oats.**

From Cowra, New South Wales, Australia. Seeds presented by A. R. Callaghan, Cowra Experiment Farm. Received January 9, 1930.

83719. AVENA BREVIS Roth.

C. 3759.

For previous introduction see No. 74023.

83720 to 83723. AVENA STRIGOSA Schreb.

83720. *C. 3758.* Variety *glabrescens.*

83721. *C. 3758.* Variety *glabrescens.*

83722. *C. 3593.* Variety *pilosa.*

83723. *C. 3756.* Variety *orcadensis.*

83724. ARECASTRUM sp. Phoenicaceae. **Palm.**

From Cali, Colombia. Seeds presented by M. J. Rivero. Received January 8, 1930.

A slender palm which attains a height of 25 or 30 feet, with a crown of pinnate, strongly bow-shaped grayish green leaves which may be used for thatching. Of use as an ornamental for the warmest parts of the United States.

83725. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Hungary. Seeds purchased from the Royal Hungarian Seed Control Station, Budapest, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received January 15, 1930.

A specially selected strain.

83726 to 83733.

From Hungary. Seeds presented by Agricultural Experiment Station for Plant Industry, Magyaróvár, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received January 14, 1930.

83726 and 83727. AVENA SATIVA L. Poaceae. **Oats.**

83726. *Improved Hungarian* oat. "Lovaszpatona" white.

83727. *Improved Hungarian* oat. "Lovaszpatona" yellow.

83728. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

Hungarian alfalfa, 1928 crop. The most winter-hardy and prolific strain.

83729 to 83733. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

Hungarian spring wheat.

83729. Magyarovar No. 81.

83730. Magyarovar No. 98.

83731. Magyarovar No. 155.

83732. Tiszagyongye No. 163.

83733. Tiszagyongye No. 164.

83734 to 83758.

From Persia. Scions collected by W. E. Whitehouse, agricultural explorer, Bureau of Plant Industry. Received December 27, 1929. Numbered in January, 1930.

83734 to 83750. PISTACIA VERA L. Anacardiaceae. **Pistache.**

83734 to 83740. October 8, 1929. From Hematabad, 12 miles from Rafsinjan. Moderately large, spreading type of tree.

83734. No. 57. Tree No. 1. Nuts of fair to good size.

83735. No. 58. Tree No. 2. Nuts good.

83736. No. 59. Tree No. 3. Nuts of good size.

83737. No. 60. Tree No. 5. Nuts fairly good.

83738. No. 61. Nuts round, of fairly good size, tree a heavy producer.

83739. No. 62. Tree No. 7. Nuts of good size.

83740. No. 63. Tree No. 8.

83741 to 83744. October 6, 1929. From Abbasabad, 1 mile from Rafsinjan.

83741. No. 65. Tree No. 6. Nuts of fair size.

83742. No. 66. Tree No. 7. Nuts of fair to good size.

83743. No. 67. Tree No. 8. Nuts of fair to good size.

83744. No. 68. Tree No. 9. Nuts of fair size.

83745. No. 69. October 4, 1929. From Agda. Nuts fair to good.

83746. No. 83. November 18, 1929. From Abbasabad.

83747 to 83749. November 19 and 20, 1929. From Hematabad.

83747. No. 84. November 20, 1929. From Hematabad.

83748. No. 300. An excellent spreading type of tree with large nuts; one of the best trees found.

83749. No. 301. An excellent spreading type of tree with large nuts.

83750. No. 302. From Agda.

83751. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. D–1. November 8, 1929. From Damghan. The tree bears fruit excellent both in size and quality, according to the owner.

83752. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. D–2. November 8, 1929. A large strong-growing tree; may prove of value for stock.

83753 to 83758. PUNICA GRANATUM L. Punicaceae. **Pomegranate.**

83753 to 83756. November 22, 1929. From Kuh Pa.

Large red fruits, vesicles large red, juicy, subacid, seed small, excellent quality.

83753. Tree No. 1.

83754. Tree No. 2.

83734 to 83758—Continued.

83755. Tree No. 3.

83756. Tree No. 4.

83757 and 83758. November 21, 1929. From Agda.

Large pink fruits; vesicles large, red, juicy; flavor slightly subacid; seeds small, quality excellent.

83757. No. 303.

83758. No. 304.

83759 to 83772. FRAGARIA spp. Rosaceae. **Strawberry.**

From Orleans, France. Plants presented by Edmond Versin. Received January 15, 1930.

83759. FRAGARIA sp.

Ameliorée Caennaise.

83760. FRAGARIA sp.

Ananas de Guemene.

83761. FRAGARIA sp.

Belle de Meaux.

83762. FRAGARIA sp.

Berger.

83763. FRAGARIA sp.

Comtesse Pierre de Brye.

83764. FRAGARIA sp.

Espoir.

83765. FRAGARIA sp.

Janus amelioree.

83766. FRAGARIA sp.

Goliath.

83767. FRAGARIA sp.

Lucida Perfecta.

83768. FRAGARIA sp.

Merveille de France.

83769. FRAGARIA sp.

Mirabilis.

83770. FRAGARIA sp.

Monstreuse caennaise.

83771. FRAGARIA sp.

Saint Antoine.

83772. FRAGARIA sp.

Victoire Française.

83773. LILIUM CORDIFOLIUM Thunb. Liliaceae. **Lily.**

From India. Seeds purchased from the Chandra Nursery, Rhenock, Sikkim, Bengal. Received January 18, 1930.

A Japanese lily, 4 to 7 feet high, with pendulous leaves 12 to 18 inches long and nearly as wide, and a raceme of 4 to 10 fragrant white flowers, which are often 6 inches long.

For previous introduction see No. 75677.

83774 to 83776.

From Hanoi, Indo-China. Seeds presented by Mr. Poilane, Institut des Recherches Agronomique de l'Indochine. Received January 2, 1930.

83774 to 83776—Continued.

83774. DIOSPYROS sp. Diospyraceae.

83775. ELAEOCARPUS sp. Elaeocarpaceae.

83776. ELAEOCARPUS sp. Elaeocarpaceae.

83777 to 83954.

From Chosen and Japan. Seeds and scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 6, 1930.

83777 to 83794. From Chosen.

83777. ACER TSCHONOSKII Maxim. Aceraceae. **Maple.**

No. 1960. From Onseiri, November 28, 1929. A graceful shrubby tree 20 feet or less high, native to Japan. The leaves turn bright yellow in the autumn.

For previous introduction see No. 77822.

83778. ARUNDINELLA ANOMALA Steud. Poaceae. **Grass.**

No. 2037. From Kanko, November 23, 1929. Dry rocky hillside. A tall coarse grass 3 to 5 feet high, which grows in large spreading masses.

For previous introduction see No. 57276.

83779. CLERODENDRUM sp. Verbenaceae.

No. 1952. From Kongo Mountain, near Onseiri, November 28, 1929. A hardy deciduous shrub with opposite entire leaves and terminal panicles of showy cylindrical flowers, followed by attractive fruits.

83780. CROTALARIA sp. Fabaceae.

No. 1777. From a hillside near Fusanmen, about 20 miles from Heijo. Plants very branching and from 12 to 18 inches high. May be of value as green manure on acid soils.

83781. CYMBOPOGON sp. Poaceae. **Grass.**

No. 1937. From the village of Kanko, Chosen, November 23, 1929. A large stout, rather coarse perennial grass with solid stems and large flower heads; extensively used in bouquets by the Japanese.

83782. DIERVILLA sp. Caprifoliaceae. **Weigela.**

No. 1947. From Onseiri, November 27, 1929. From canyons in the Kongo Mountains; said to have pink flowers.

83783 to 83792. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

Scions from the fruit farm of Mr. Narusada, on river-bottom land not far from Fusan.

83783. No. 3101. Fruits rather small, pointed, golden yellow; 1 inch through and about 2 inches long; astringent and used as a stock.

83784. No. 3102. Fruits flat, square, red, of intermediate size, astringent; ripen late.

83785. No. 3103. An unnamed early variety, possibly *Wase.* Fruits nonastringent, of medium size; at first red, but becoming dark later in the season.

83777 to 83954—Continued.

83786. No. 3106. Fruits round, yellow, of medium size, astringent, ripening late in October.

83787. No. 3107. *Hyakume.* Fruits round, yellow, medium to large and nonastringent.

83788. No. 3109. The small red fruits are of a peculiar shape good for stock and perhaps for juice.

83789. No. 3110. *Emon.* The flat medium-sized fruits are red, nonastringent, and ripen late.

83790. No. 3111. *Jiro.* The yellow fruits are medium sized, somewhat pointed, nonastringent, and ripen early in October.

83791. No. 3114. Fruits large, reddish, shaped like the Fuyu, nonastringent, and late ripening.

83792. No. 3115. A seedling of Fuyu; fruits of medium size, yellowish red, somewhat flattened, nonastringent, ripening in midseason.

83793. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

No. 1990. From Tansen, Chosen, December 1, 1929. *Ponpasi.* A spring barley.

83794. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

No. 1992. From Tansen, Chosen, December 1, 1929. *Ponpan.* A spring barley. The temperature goes to zero F. in this region.

83795. ILEX LATIFOLIA Thunb. Aquifoliaceae. **Holly.**

No. 3155. From Tokyo, Japan, December 13, 1929. A Japanese holly, one of the most attractive of the genus, which sometimes develops into a tree 60 feet tall. The glossy green leaves, 3 to 7 inches long, are oval or narrowly oblong and the red berries, about one-third of an inch in diameter, are produced in dense clusters.

For previous introduction see No. 67362.

83796 to 83801. LESPEDEZA spp. Fabaceae. **Bushclover.**

The lespedezas are small hardy shrubby plants with racemes or heads of pea-shaped flowers. Certain species are of value as forage.

83796. LESPEDEZA sp.

No. 1970. From Tansen, Chosen, December 1, 1929. Plants 20 to 30 inches high, seeds borne in buttonlike clusters along stems. Very heavy seeder, good forage plant.

83797. LESPEDEZA sp.

No. 1971. From Tansen, Chosen, December 1, 1929. Plants 15 to 24 inches high, seed in small clusters; a prolific seeder.

83798. LESPEDEZA sp.

No. 2036. From Kanko, Chosen, November 23, 1929. Plants 8 to 18 inches high. This is undoubtedly a strain of Korean lespedeza which was found growing in dry rocky soil.

83777 to 83954—Continued.

83799. LESPEDEZA sp.

No. 2058. **From the Diamond Mountains, near Onseiri, Chosen, November 28, 1929.** Plants 5 to 8 feet high and woody.

83800. LESPEDEZA sp.

No. 2059. From the Diamond Mountains, November 28, 1929. Plants 4 to 6 feet high.

83801. LESPEDEZA sp.

No. 2060. From near Tansen, Chosen, November 30, 1929.

83802. LIGUSTRUM sp. Oleaceae. **Privet.**

No. 3157. From Tokyo, Japan, December 13, 1929. A small tree about 20 feet high; a late-blooming variety with large clusters of very showy flowers and later clusters of small bluish black fruits. A good ornamental.

83803. LILIUM AURATUM Lindl. **Goldband lily.**

No. 3152. *Yama yuri.* From Subashiri, Shizuoka Ken, Mount Fuji, Japan, December 12, 1929. A lily with large white fragrant flowers.

83804. LILIUM CORDIFOLIUM Thunb.

No. 3133. *Uba-uri.* From a forest farm, Sapporo, Hokushu, Japan, December 12, 1929.

83805. LILIUM DAURICUM VENUSTUM (Kunth) Wilson.

No. 3150. *Fuji Hirato.* From Subashiri, Shizuoka Ken, Mount Fuji, Japan, December 12, 1929. A form of *L. dauricum* which is distingulshed by clear apricot-colored flowers without spots.

83806. LILIUM MEDEOLOIDES A. Gray. **Wheel lily.**

No. 3151. *Hime karuma.* From Subashiri, Shizuoka Ken, Mount Fuji, Japan, December 12, 1929. A lily with a smooth stem 1 to 2 feet high bearing one or two whorls of lanceolate leaves near the middle and a few scattered leaves above. The one to six bright orange-red flowers are dotted purple and have red anthers. Native to Japan.

83807. LYSIMACHIA sp. Primulaceae. **Loosestrife.**

No. 1946. From the Diamond Mountains, near Onseiri, Chosen, November 27, 1929. A plant which sometimes grows over 4 feet high and produces a single spike of white flowers 6 to 8 inches in length.

83808 to 83810. PHASEOLUS spp. Fabaceae. **Bean.**

83808. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

No. 1973. From the Grain Investigation Laboratory, Tansen, Chosen, December 1, 1929. Beans medium large and dark maroon; used in making adsuki confections.

83809. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

No. 2049. *Chapatsu.* Mixed varieties obtained at a store in Genzan, Chosen, November 26, 1929. Mixtures such as these are ground and used as cattle feed.

83777 to 83954—Continued.

83810. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 2048. *Charokuto.* Obtained at a store in Genzan, Chosen, November 26, 1929. Mixed green and yellow mung beans used for bean sprouts.

83811. PHYSOCARPUS AMURENSIS Maxim. Rosaceae. **Ninebark.**

No. 3147. From the Imperial University Botanic Garden, Hokushu, Japan. A shrub about 10 feet high, closely resembling the common ninebark, *P. opulifolius*, but the doubly serrate, 3 to 5-lobed leaves are larger, as are also the loose umbels of white flowers. It is a native of Manchuria and Chosen.

83812. RHODODENDRON sp. Ericaceae. **Azalea.**

December 12, 1929. From Chosen.

[Received without information.]

83813. PYRUS sp. Malaceae. **Pear.**

No. 3116. *Bansan Kichi* or *Okusan Kichi.* From Kiho, Chosen, December 7, 1929. Scions from the Narusada fruit farm on river-bottom land not far from Fusan. A very late russet pear; said to be the largest in Japan.

83814. PYRUS sp. Malaceae. **Pear.**

No. 3117. *Imamura.* From Kiho, Chosen, December 7, 1929. Scions from the Narusada fruit farm on river-bottom land not far from Fusan; large russet Japanese pear.

83815 to 83829. RHODODENDRON spp. Ericaceae. **Azalea.**

83815. RHODODENDRON ALBRECHTII Maxim.

No. 3145. From the Botanic Garden, Imperial University, Sapporo, Hokushu, Japan, December 12, 1929. A deciduous shrub 4 to 5 feet high with obovate leaves 2 to 5 inches long, clustered at the ends of the purple brown branchlets. The rotate-campanulate, red-purple flowers are about 2 inches across and appear with the leaves which turn yellow in the autumn. Native to Japan.

83816. RHODODENDRON BRACHYCARPUM D. Don. **Fujiyama rhododendron.**

No. 3143. From the Botanic Garden, Imperial University, Sapporo, Hokushu, Japan, December 12, 1929. An evergreen shrub about 12 feet high with gray-tomentose branchlets and oblong-lanceolate often auriculate leaves, 3 to 8 inches long, dark green and reticulated above, and covered beneath with dun-colored tomentum. The broadly funnelform flowers, about 2 inches across, are white or yellowish, striped and flushed pink, and spotted with green or brown. It is native to Japan and Chosen.

83817. RHODODENDRON SCHLIPPENBACHII Maxim. **Royal azalea.**

No. 3142. From the Botanic Garden, Imperial University, Sapporo, Hokushu, Japan, December 12, 1929. A beautiful deciduous shrub 15 feet high, with large clear pink flowers appearing before the leaves in the spring. The broadly obovate leaves, 2 to 4 inches long, are dark green above, paler beneath, and change to yellow, orange, and crimson in the autumn. Native to Manchuria, Chosen, and Japan.

For previous introduction see No. 78411.

83818. RHODODENDRON sp.

No. 1934. From Keijo, Chosen, November 22, 1929. An azalea with medium-sized narrow leaves, from the grounds of the Keijo Government Railway Hotel.

83819. RHODODENDRON sp.

No. 1935. From Keijo, Chosen, November 22, 1929. An azalea with rather small narrow leaves, from the grounds of the Government Railway Hotel.

83820. RHODODENDRON sp.

No. 1939. From the Botanical Garden, Keijo, Chosen, November 26, 1929.

83821. RHODODENDRON sp.

No. 1940. From the Botanical Garden, Keijo, Chosen, November 26, 1929.

83822. RHODODENDRON sp.

No. 1941. From the Botanical Garden, Keijo, Chosen, November 26, 1929. Plants growing in a small area in one corner of the garden, which resemble those sent in under No. 1940 [No. 83821].

83823. RHODODENDRON sp.

No. 1942. From Keijo, Chosen, November 26, 1929.

83824. RHODODENDRON sp.

No. 1943. From Keijo, Chosen, November 26, 1929.

83825. RHODODENDRON sp.

No. 1944. From Keijo, Chosen, November 26, 1929.

83826. RHODODENDRON sp.

No. 1945. From Onseiri, Chosen, November 27, 1929. From a mountain side near the village. Plants 3 inches high.

83827. RHODODENDRON sp.

No. 1948. From a mountain side near the village of Onseiri, Chosen, November 27, 1929. A plant producing long narrow seed pods, quite different from No. 1945 [No. 83826].

83828. RHODODENDRON sp.

No. 1954. From Kongo Mountain, near Onseiri, Chosen, November 28, 1929. An azalea with rather long slender seed pods; not so common as No. 1945 [No. 83826].

83829. RHODODENDRON sp.

No. 2000. From Suigen, Chosen, Agricultural Experiment Station, December 5, 1929. From plants about 3 inches high with a small, hairy seed pod and a 5-parted persistent calyx.

83830. RHUS sp. Anacardiaceae. **Sumac.**

No. 1962. November 28, 1929. From Onseiri, Chosen. A shrubby sumac which resembles the well-known *Rhus copallina* of the eastern United States.

83831 to 83947. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

83777 to 83954—Continued.

83831. No. 1964. *Chonte.* From Chosen. November 30, 1929. From near Tansen. A medium-sized, greenish yellow bean with a pale hilum; used as green manure and sold largely to the southern Japanese islands.

83832. No. 1965. *Chirigunkon.* November 30, 1929. From near Tansen. A very small, nearly round black variety, used for bean sprouts.

83833. No. 1966. *Chonkon.* November 30, 1929. From near Tansen. A medium-sized, greenish yellow variety with a pale hilum.

83834. No. 1967. *Pakute.* November 30, 1929. From near Tansen. Seeds medium sized, oval, varying from yellow to greenish yellow. Used as boiled beans in the home and also used as cattle feed.

83835. No. 1968. *Chonte.* November 30, 1929. Purchased in the market in Tansen. Medium sized, greenish yellow with pale hilum.

83836. No. 1969. *Zakkon* (mixture). November 30, 1929. Purchased from the market in Tansen. A mixture of green, black, yellow and yellowish green varieties which are boiled and used as cattle feed.

83837 to 83844. Obtained December 1, 1929, from the Grain Investigation Laboratory, Tansen.

83837. No. 1974. *Pakute.* Large, nearly round, yellow with pale hilum. Used on main island for candied beans and other soybean confections.

83838. No. 1975. *Oiarukon.* Very large, oval, yellow with pale hilum. Used on main island for candied beans and other soybean confections.

83839. No. 1976. *Chonte.* Seed medium sized, oval, yellowish green with pale hilum. Used for green manure on the main and southern Japanese islands.

83840. No. 1977. *Anpenkon.* Medium large, nearly round, glossy yellow with pale hilum. Used for making bean curd.

83841. No. 1978. *Pakute.* Large, nearly round, glossy yellow with pale hilum. Used on main Japanese island for confections.

83842. No. 1979. *Tanchonkon.* Medium sized, yellowish green, with pale hilum. Used on main island and southern Japanese islands as a green manure.

83843. No. 1980. *Tanchonkon.* Medium sized, yellowish green, oval, with pale hilum. Used on main and southern Japanese islands as a green manure. This sample is typical *Tanchonkon.*

83844. No. 1981. *Orugibarukon.* Medium sized, oval, glossy yellow with pale hilum. Used for soy sauce, bean curd, miso, and natto.

83845 to 83851. Obtained December 1, 1929, from a farmer near Tansen.

83845. No. 1982. *Oiarukon.* Medium large, oval, glossy yellow with pale hilum. Used for bean curd, miso, soy sauce, and natto.

83777 to 83954—Continued.

83846. No. 1983. *Chondarekon.* Medium sized, oval, yellowish green, with pale hilum. This variety resembles the Tanchon very closely and is used on the main and southern Japanese islands as a green manure.

83847. No. 1984. *Chonte.* Medium sized, yellowish green with pale hilum. Used as a green manure.

83848. No. 1985. *Chomutari.* Medium small, oval, yellowish green and green with a black hilum. Used for bean sprouts.

83849. No. 1986. *Oiarukon.* Medium large, nearly round, glossy yellow with pale hilum. Used for bean curd.

83850. No. 1987. *Chonte.* Medium sized, oval, yellowish green with a pale hilum. Used as a green manure.

83851. No. 1988. *Tanchon.* Medium sized, oval, yellowish green with a pale hilum. Used on main and southern Japanese islands as a green manure.

83852. No. 1993. *Chirugun.* December 1, 1929. Obtained from a merchant in Tansen. Very small round black variety with a yellow hilum. Used for bean sprouts.

83853 to 83856. November 23, 1929. Obtained from the Grain Inspection Office, Seihyoko.

83853. No. 2024. *Ryuzan.* Medium small, oval, glossy yellow with a pale hilum. Used for bean curd, natto, miso, and soy sauce.

83854. No. 2025. *Ryuzan.* A third-grade soybean, medium sized, nearly round, glossy yellow with a pale hilum; slight admixture of yellow with other colors of hilum. Used for natto, soy sauce, miso, and bean curd.

83855. No. 2026. *Ryuzan.* A first-grade soybean, medium sized, oval, nearly round, yellow with a pale hilum. Used for making bean curd, natto, soy sauce, and miso.

83856. No. 2027. *Ryuzan.* A second-grade soybean, medium sized, nearly round, glossy yellow with a pale hilum. Used for bean curd, soy sauce, natto, and miso.

83857 and 83858. November 23, 1929. Purchased from a store in Ojuri.

83857. No. 2028. *Kiriqunkon.* Very small, round, yellow, varying somewhat in size; hilum in most of sample pale. Used for sprouts.

83858. No. 2029. *Pakute.* Medium to medium large, oval, yellow, with a pale hilum. Used for bean curd, natto, soy sauce, and miso.

83859 to 83864. November 23, 1929. Obtained from a grain merchant in Seihyoko.

83859. No. 2030. *Chechonkon.* A fourth-grade soybean. Medium sized, oval, glossy yellow, varying in color of hilum. Used for natto, soy sauce, bean curd, and miso.

83777 to 83954—Continued.

83860. No. 2031. *Chechonkon.* Medium sized, oval, glossy yellow, with hilum varying from light brown to slate black. Used for bean curd, soy sauce, natto, and miso.

83861. No. 2032. *Munmaku.* Graded as No. 3. Medium sized, glossy yellow, oval, and with a pale hilum. Used in making natto, miso, bean curd, and soy sauce.

83862. No. 2033. *Mumanikon.* Grade mixed sample of oval, glossy yellow strains, varying from medium to medium large; hilums vary from pale to dark brown. Used for soy sauce, natto, miso, and bean curd.

83863. No. 2034. *Mumanikon.* Grade No. 1. Medium large, nearly round, glossy yellow, with a pale hilum. Used for natto, miso, soy sauce, and bean curd.

83864. No. 2035. *Munmakukon.* Medium sized, oval, glossy yellow with a dark-brown hilum. Used for natto, bean curd, miso, and soy sauce.

83865 and 83866. November 25, 1929. Received through Dr. T. Nagai, Suigen Agricultural Experiment Station.

83865. No. 2038. A handle-shaped, stemmed variety with large bunch of pods at top of stem, stems 2–3 inches broad and about one-fourth of an inch thick. Seed medium small, yellow, more or less mottled. One of the most peculiar varieties we have ever seen.

83866. No. 2039. A belt-shaped, stemmed variety with bunches of pods scattered along the wide thin stem. Seed black and greenish yellow (mottled). A very peculiar variety which was developed by Dr. Nagai.

83867. No. 2041. *Pakute.* November 26, 1929. Purchased from a grain store in Genzan. Mixed sample of medium-sized yellow beans, varying in color of hilums. Used for miso, natto, and boiled beans.

83868 to 83871. November 26, 1929. Obtained from a warehouse in Genzan.

83868. No. 2042. *Anpenkon.* Excellent grade. Large, nearly round, yellow variety with a pale hilum. Used for bean curd, miso, and soy sauce.

83869. No. 2043. *Anpenkon.* First grade. Medium sized nearly round, yellow with a pale hilum Used for bean curd, soy sauce, and miso.

83870. No. 2044. *Anpenkon.* Second grade. Medium sized, oval, yellow with a pale hilum. Used for bean curd, soy sauce, and miso.

83871. No. 2045. *Punsenkon.* Third grade. Medium sized, oval, glossy, more or less cloudy yellow with a pale hilum. Used as boiled beans and in making home soy sauce and miso.

83872. No. 2046. *Kirugunkon.* Purchased from a bean sprout store in Genzan November 26, 1929. A mixed sample of yellow varieties, varying in size, shape, and in color of hilum. Used for soybean sprouts.

83873. No. 2047. *Kurugunkonfankon.* November 26, 1929. Purchased from a grain store in Genzan. Very small, black with yellow hilum; admixture of small, round, brown, very similar to Brownie (No. 17256). Said to be used for sprouts.

83874 to 83877. November 29, 1929. Obtained from a grain merchant in Kote.

83874. No. 2050. *Chinuikon.* Medium small, oval, yellow, with a pale hilum. Some admixture of brown hilum beans. Used for bean sprouts, bean curd, miso, and soy sauce.

83875. No. 2051. *Iyonkon.* Medium sized, nearly round, glossy yellow, with a pale hilum. Used for bean curd, soy sauce, natto, and miso. Classed as excellent grade.

83876. No. 2052. *Iyontekon.* Medium sized, nearly round, glossy yellow, with a pale hilum. Used for soy sauce, bean curd, miso, and natto.

83877. No. 2053. *Iyontekon.* Third grade. Medium large, oval, yellow, with a brown hilum. Used for bean curd, miso, soy sauce, and natto.

83878 to 83881. November 29, 1929. Obtained from a grain merchant at the Genzan wharf.

83878. No. 2054. *Odamakon.* First grade. Medium large, oval, glossy yellow, with a pale hilum. Used for bean curd, soy sauce, miso, and natto.

83879. No. 2055. *Orugibarukon.* Third grade. Medium sized, oval, somewhat cloudy, glossy yellow, with a pale hilum. Used for soy sauce, miso, and natto.

83880. No. 2056. *Orugibarukon.* Fourth grade. Medium small, oval, somewhat cloudy, glossy yellow, with a pale hilum. Used for soy sauce, miso, and natto.

83881. No. 2057. *Orukon.* An early-maturing variety with medium large, oval, somewhat flattened seed. Used for making candied beans and bean paste.

83882 to 83947. December 2, 1929. From Dr. T. Nagai, Agricultural Experiment Station, Suigen.

83882. No. 2061. *Suigen No. 1.* Medium sized, nearly round, yellow, with a pale hilum and much mottled.

83883. No. 2062. *Suigen No. 5.* Medium large, oval, yellow, with a light-brown hilum. Some brown mottling.

83884. No. 2063. *Suigen No. 8.* Mediam sized, nearly round, glossy yellow, with a pale hilum.

83885. No. 2064. *Suigen No. 9.* An excellent variety, medium sized, nearly round, glossy yellow, with a pale hilum.

83777 to 83954—Continued.

83886. No. 2065. *Suigen No. 10.* Medium sized, oval, yellow, with a brown hilum. Much mottling.

83887. No. 2066. *Chotan Shiromejunkei.* Medium sized, glossy yellow, with a pale hilum.

83888. No. 2067. *Oiarukonjunkei.* Medium large, oval, yellow, with hilum varying from pale to brown.

83889. No. 2068. *Hotadai.* Medium large, oval yellow, with a brown hilum. Much mottled with brown.

83890. No. 2069. *Ekizan.* Medium sized, oval, yellow with a russet-brown hilum. The seed is more or less flattened.

83891. No. 2070. *Tansern.* Large, oval, yellow, with a pale hilum and more or less brown mottling.

83892. No. 2071. *Akagara.* Medium sized, oval, yellow, with a dark-brown hilum.

83893. No. 2072. *Quanpadai.* Medium sized, oval, yellow, with a pale hilum and mottled with dark brown.

83894. No. 2073. *Ange chaji.* Medium sized, oval, yellow, with a pale hilum and some brown mottling.

83895. No. 2074. *Sonbizebikon.* Large, greenish yellow with brown saddle, slightly flattened.

83896. No. 2075. *Tamazukuri.* Medium sized, nearly round, glossy yellow, with a pale hilum.

83897. No. 2076. *Geizitsu.* Medium sized, oval, yellow, with a brown hilum.

83898. No. 2077. *Sangoro.* Medium large, nearly round, yellow, with a pale hilum and some brown marking.

83899. No. 2078. *Chadaizu.* Medium sized, oval, brown.

83900. No. 2079. *Anpen.* Medium sized, nearly round, glossy yellow, with a pale slate hilum.

83901. No. 2080. *Tansentanryoku.* Large, greenish yellow, with a pale hilum. Used as a green manure.

83902. No. 2081. *Urusan.* Medium sized, somewhat elongated and flattened, yellow with brown hilum and some mottling.

83903. No. 2082. *Koshuchuryu.* Medium sized, oval, glossy yellow, with a pale slate hilum.

83904. No. 2083. *Heizya.* Medium large, nearly round, yellow, with a pale hilum and slight mottling.

83905. No. 2084. *Chuseidai.* Medium sized, oval, glossy yellow, with a pale hilum.

83906. No. 2085. *Pakuarukon.* Medium large, nearly round, yellow, with a pale to light brown hilum.

83907. No. 2086. *Fukushima.* Medium sized, nearly round, yellow, with a brown hilum and much mottled with brown.

83777 to 83954—Continued.

83908. No. 2087. *Fimadaizu.* Medium sized, oval, black and white (black testa split more or less irregularly on each side).

83909. No. 2088. *Madai.* Medium dium sized, oval, slightly flattened, yellow with brown hilum, considerably mottled with brown.

83910. No. 2089. *Chotan chame.* Medium sized, oval, yellow, with a large pronounced brown hilum. Rather a striking seed.

83911. No. 2090. *Kurodaizu.* Medium large, oval, black.

83912. No. 2091. *Ryokisetsu.* Medium large, oval, glossy, yellow with a pale hilum and slightly mottled with brown.

83913. No. 2092. *Kinto.* Medium sized, oval, very pale yellow, with a russet-brown hilum.

83914. No. 2093. *Orugibai.* Medium sized, nearly round, glossy yellow, with a pale-brown hilum.

83915. No. 2094. *Shokeimeidai.* Medium small, nearly round, yellow, slightly mottled with brown and black and with a brown hilum.

83916. No. 2095. *Shihakudai.* Medium sized, oval, glossy yellow, with a pale hilum and slightly mottled with brown.

83917. No. 2096. *Suigen ao.* Medium sized, oval, green, with a pale brown to brown hilum.

83918. No. 2097. *Chuhokushiro.* Medium sized, nearly round, cloudy yellow, with a brown hilum and some brown mottling.

83919. No. 2098. *Mizukugari.* Medium sized, oval, yellow, with a brown hilum and much mottled with brown.

83920. No. 2099. *Hakusei chadaizu.* Medium sized, olive brown, with green cotyledons.

83921. No. 2100. *Rikuu No. 3.* Medium sized, oval, green, with a pale brown hilum.

83922. No. 2101. *Rikuu No. 6.* Medium sized, nearly round, yellow, more or less mottled with brown and a russet brown hilum.

83923. No. 2102. *Rikuu No. 10.* Medium sized, nearly round, glossy yellow, with a brown hilum.

83924. No. 2103. *Rikuu No. 19.* Medium sized, round, glossy yellow, with a brown hilum.

83925. No. 2104. *Rikuu No. 22.* Medium small, nearly round, yellow, heavily mottled with brown and having a brown hilum.

83926. No. 2105. *Rikuu No. 23.* Medium small, nearly round, glossy yellow, with a deep-brown hilum and slight mottling of brown.

83927. No. 2106. *Rikuu No. 27.* Medium sized, nearly round, glossy yellow, with a prominent brown hilum and some brown mottling.

83928. No. 2107. *Rikuu No. 28.* Medium sized, nearly round, glossy yellow, with a dark-brown hilum.

83777 to 83954—Continued.

83929. No. 2108. *Kurozaya.* Medium sized, greenish yellow, oval, with a russet-brown hilum.

83930. No. 2109. *Sennari.* Medium small, nearly round, glossy yellow, with a dark-brown hilum which is quite prominent; mottled with brown.

83931. No. 2110. *Kurodaizu.* Medium large, much flattened, black, with a slight dent which is peculiar to this variety.

83932. No. 2111. *Chogetsu.* Medium sized, oval, yellow, with a brown hilum; heavily mottled with brown.

83933. No. 2112. *Takiya.* Medium sized, oval, glossy yellow, with a light russet-brown hilum.

83934. No. 2113. *Yukino shita.* Varies from medium small to medium large, oval, yellow, heavily mottled, with a brown hilum.

83935. No. 2115. *Karimame.* Medium small, somewhat flattened, greenish yellow, with a brown hilum and very heavily mottled with brown.

83936. No. 2116. *Aozaya.* Large flat, yellowish green, with a black hilum. Very similar to Hato [No. 40118]. An excellent variety for a green vegetable bean.

83937. No. 2118. *Akazaya.* Medium sized, oval, yellow, with a dark-brown hilum.

83938. No. 2119. *Echo No. 5.* Medium large, oval, olive green, with a black hilum.

83939. No. 2120. *Echo* No. *6.* Medium sized, oval, glossy yellow, with a dark-brown hilum.

83940. No. 2121. *Echo No. 24.* Medium small, oval, yellow, with a small hilum.

83941. No. 2122. *Yoshioka churyu.* Medium small, oval, greenish yellow, with a slate-black hilum and slight black mottling.

83942. No. 2123. *Kuro churyu.* Medium small, black, slightly flattened.

83943. No. 2124. *Yukiware.* More or less mixed sample of brown seed varying from very small to medium sized.

83944. No. 2128. *Oiarukonkii.* Large, nearly round, glossy yellow with a pale hilum. Slight admixture of medium sized yellow with brown hilum.

83945. No. 2129. *Dairyu Tsurunoko.* Very large, oval, yellow, with pale brown hilum and much brown mottling.

83946. No. 2130. *Kongo shoryu.* Medium sized, oval, glossy yellow, with a pale hilum.

83947. No. 2131. *Kongo dairyu.* Medium large, nearly round, glossy yellow, with a pale-brown hilum.

83777 to 83954—Continued.

83948. STEPHANANDRA sp. Rosaceae.

No. 1949. From Onseiri, Chosen, November 27, 1929. A more or less decumbent, rather finely branched ornamental shrub, with netted leaves; closely related to spirea.

83949. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

No. 1972. From Tansen, Chosen, December 1, 1929. From plants near the Grain Investigation Building.

83950. VIBURNUM sp. Caprifoliaceae.

No. 1951. From Onseiri, Chosen, November 27, 1929. A red-berried shrub 4 to 6 feet tall.

83951. ZANTHOXYLUM PIPERITUM (L.) DC. Rutaceae. **Japanese prickly-ash.**

No. 3153. *Sancho.* December 12, 1929. From Subashiri, Shizouka Ken, Mount Fuji, Japan. A shrub or small tree armed with slender prickles. The compound leaves are made up of 11 to 19 ovate leaflets, and the small corymbs of greenish flowers are followed by gland-dotted reddish fruits which open and expose the black seeds. Native to Japan.

83952. (Undetermined.)

No. 1782. From Fusanmen, Chosen, November 17, 1929. A much-branched perennial, 24 to 36 inches high.

83953. CALLICARPA JAPONICA Thunb. Verbenaceae. **Japanese beautyberry.**

No. 1953. From Onseiri, Chosen, November 28, 1929. The plants were well loaded with lavender pink fruits, which, in contrast with the grayish stems, presented a very attractive appearance.

83954. (Undetermined.)

No. 1997. From Onseiri, Chosen, November 28, 1929. An undetermined shrub.

83955 and 83956.

From Honolulu, Hawaii. Seeds presented by the Hawaiian Sugar Planters' Association. Received January 18, 1930.

83955. ALBIZZIA CHINENSIS (Osbeck) Merr. (*A. stipulata* Boiv.). Mimosaceae.

A large, rapidly growing tree, native to the subtropical regions of India. It is said to have been found very satisfactory in Assam as a shade for tea. The roots do not penetrate the soil deeply and the foliage does not make a dense shade.

For previous introduction see No. 63582.

83956. CORDIA SUBCORDATA Lam. Boraginaceae.

A tree up to 50 feet high with subcordate leaves 5 to 6 inches long and short terminal and lateral cymes of large orange campanulate flowers. The soft, light, durable wood is used for cabinetwork, exhibiting wavy ribbons of light and dark brown when polished. Native to the Hawaiian and other tropical islands.

83957 to 84251.

From southwestern China. Seeds collected by Dr. J. F. Rock, National Geographic Society, Washington, D. C. Received January 10, 1930.

83957. ABIES sp. Pinaceae. **Fir.**

No. 18487. November, 1929. The following material was collected in southwestern Szechwan Province, west of the Yalung, in Muli territory, on Mount Siga, northwest of Kulu Monastery. Tree 50 to 80 feet high, bark pale brown, leaves long, pale green, white beneath; cones very long, 6 inches or more. Scales smooth with tips dull brownish blue. This species occurs at lower elevations, 9,500 to 10,500 feet, in company with pines (*Pinus sinensis yunnanensis*) on the drier slopes. The wood is said to be valuable.

83958 to 83961. ACER spp. Aceraceae. **Maple.**

83958. ACER sp.

No. 18230. Forests of Karadi, altitude 11,500 feet. Tree 25 to 30 feet high.

83959. ACER sp.

No. 18417. Western slope of Mount Sitsa, Salwin Valley, at 12,500 feet altitude. Tree 35 to 40 feet; leaves deeply three lobed.

83960. ACER sp.

No. 18419. Western slope of Mount Sitsa, Salwin Valley. Tree 25 feet high; leaves oblong, slightly lobed at base; fruits small in short racemes.

83961. ACER sp.

No. 18425. Western slope of Mount Sitsa, Salwin Valley. Tree 30 to 40 feet; leaves large, pubescent beneath; fruit in long racemes. Found in forests at 12,500 feet altitude.

83962 to 93965. ACONITUM spp. Ranunculaceae. **Monkshood.**

83962. ACONITUM sp.

No. 18121. A species with purple flowers, collected at an altitude of 13,500 feet in alpine meadows.

83963. ACONITUM sp.

No. 18276. A beautiful climber with blue flowers, found growing at 14,000 feet altitude on Mount Giboh, south of Muli.

83964. ACONITUM sp.

A plant 4 to 5 feet tall, with blue flowers and deeply lobed leaves. Found on the Likiang Snow Range at 11,000 feet altitude.

83965. ACONITUM sp.

A plant several feet tall, with very large leaves and purplish blue flowers. Found in alpine meadows in the Likiang Snow Range at 11,500 feet altitude.

83966. ANDROSACE sp. Primulaceae.

No. 18166. A plant with pink flowers, found in alpine meadows at 13,500 feet altitude in the Kulu Mountains, west of Yalung. Collected in September and October, 1929.

83967. ANEMONE sp. Ranunculaceae.

83957 to 84251—Continued.

No. 18248. An anemone with a small red flower, found in alpine meadows at 14,500 feet altitude on Mount Mitzuga, September and October, 1929.

83968. ASTER sp. Asteraceae.

No. 18218. An aster with large purplish blue flowers, found in alpine meadows at 12,500 feet altitude in the mountains of Kulu in eastern Muli territory, but west of Yalung and north of the Litang River. Collected in September and October, 1929.

83969. BENZOIN sp. Lauraceae. **Spicebush.**

No. 18259. Mount Mitzuga, Muli, October, 1929. A tree 20 feet high, with fragrant yellow flowers, found in forests.

83970. CEPHALOTAXUS sp. Taxaceae. **Plum-yew.**

No. 18478. September and October, 1929. Forests of Lutien, below Litiginy, west of Yaungtze, at an altitude of 10,500 feet. A tree 80 to 100 feet high, with bluish green, plumlike fruits.

83971. COLUTEA sp. Fabaceae. **Bladder-senna.**

No. 18126. September and October, 1929. Southwestern Szechwan Province, west of the Yalung, in Muli territory on Mount Siga, northwest of Kulu Monastery. A species with yellow flowers, found in alpine meadows at 14,500 feet altitude.

83972. PIPTANTHUS sp. Fabaceae.

No. 18266. September and October, 1929. Mount Mitzuga, western slopes back of Muli Monastery. A shrub with yellow flowers, found in alpine meadows at 13,000 feet altitude.

83973 to 83976. COTONEASTER spp. Malaceae.

83973. COTONEASTER sp.

No. 18154. September and October, 1929. Mount Siga western slopes, back of Muli Monastery. A prostrate shrub with red flowers, found in alpine meadows at 13,500 feet altitude.

83974. COTONEASTER sp.

No. 18250. September and October, 1929. Slopes of Mount Mitzuga, Muli territory. A shrub 5 to 6 feet high; found in alpine meadows at 13,000 feet altitude.

83975. COTONEASTER sp.

No. 18279.

83976. COTONEASTER sp.

Likiang Snow Range, 10,000 to 12,000 feet altitude. A shrub 6 to 10 feet high, with white flowers and red fruits.

83977. DEBREGEASIA sp. Urticaceae.

No. 18261. October, 1929. Muli Monastery, 9,600 feet altitude. An urticaceous shrub, 5 to 10 feet high, found along streams. The fruits are orange colored.

83978. DELPHINIUM LIKIANGENSE Franch. Ranunculaceae. **Larkspur.**

Likiang Snow Range, 13,000 feet altitude, November, 1929. One of the finest larkspurs; the dark-green glossy leaves are in cushionlike rosettes; the large,

83957 to 84251—Continued.

rich blue flowers are 1 inch across, and there are several spikes on a plant at one time. Found in glacier gravel.

83979. DELPHINIUM sp. Ranunculaceae. Larkspur.

Eastern slopes of Likiang Snow Range, at 14,500 feet altitude, November, 1929. A plant 6 inches high, with rather large blue flowers; found in alpine meadows among rocks.

83980. DEUTZIA sp. Hydrangeaceae.

No. 18358. Mount Fuchuan, west of the Mekong River and west of Weihsi, northwestern Yunnan, on the Mekong-Salwin Divide, October, 1929. A shrub 10 to 15 feet high, with purple flowers; found in forests at 12,000 feet altitude.

83981 to 83983. DIDISSANDRA spp. Gesneriaceae.

83981. DIDISSANDRA SERICEA Craib.

No. 18269. Muli Mountain, 10,000 feet altitude, September and October, 1929. A very handsome rock plant, with blue flowers and silvery leaves which grow in rosettes.

83982. DIDISSANDRA SERICEA Craib.

Nyarophy Island in Lake Yunging, Yunnan. A rock plant with blue flowers and leaves forming rosettes.

83983. DIDISSANDRA sp.

Yunnan, September and October, 1929. A gesneriaceous rock plant with large dark-green leaves which form rosettes and large cream-colored flowers; found on moist rocky shady banks in the forests along the lake shore at 9,600 feet altitude.

83984. DIPELTA sp. Caprifoliaceae.

No. 18262. Forests of Muli, Mount Mitzuga, September and October, 1929. A shrub 6 to 10 feet high, with large whitish flowers, mauvé colored to pink; collected at 12,000 feet altiude.

83985 to 83989. ENKIANTHUS spp. Ericaceae.

Western slopes of Mount Sitsa, Salwin Valley, September and October, 1929.

83985. ENKIANTHUS sp.

No. 18422. A tree 10 to 15 feet high with striped brick-red flowers; found in open forests at 11,000 feet altitude.

83986. ENKIANTHUS sp.

No. 18423. A tree 10 to 15 feet high, with pale yellow flowers; found in open forests at 12,500 feet altitude.

83987. ENKIANTHUS sp.

No. 18426. A tree 10 to 15 feet high, with pale yellow flowers which are not striped; found in fir and spruce forests at 12,500 feet altitude.

83988. ENKIANTHUS sp.

No. 18470. West of Litiping. A tree 10 to 15 feet high, with white flowers tinged with purple at the apex of the petals; also faintly striped. Found at 10,000 feet altitude.

83989. ENKIANTHUS sp.

No. 18472. West of Litiping, at 10,000 feet altitude. A tree 10 to 15 feet high, with brick-red flowers having yellow stripes.

83957 to 84251—Continued.

83990 to 83994. GENTIANA spp. Gentianaceae. Gentian.

83990. GENTIANA sp.

No. 18133. Southwest Szechwan, west of the Yalung, in Muli territory on Mount Siga, northeast of Kulu Monastery, in alpine meadows at 14,000 feet altitude. September and October, 1929. A plant with pale-purple flowers.

83991. GENTIANA sp.

No. 18193. Mountains of Kulu, in eastern Muli territory, west of Yalung and north of the Litang River, September and October, 1929. An herb with blue flowers collected in alpine meadows at 14,000 feet altitude.

83992. GENTIANA sp.

No. 18202. Mountains of Kulu, in eastern Muli territory, west of Yalung and north of the Litang River, September and October, 1929. A plant 12 to 18 inches high, with rich blue flowers; it forms very handsome clumps on the outskirts of forests at 14,500 feet altitude.

83993. GENTIANA sp.

Likiang Snow Range. A plant 18 inches high, with large purple flowers; found in alpine meadows at 10,000 feet altitude.

83994. GENTIANA sp.

Likiang Snow Range. A prostrate herb with blue flowers; found in gravel at 14,500 feet altitude.

83995. HESPERIS sp. Brassicaceae.

No. 18265. Mitzuga, September and October, 1929. A plant with pink flowers and a long rootstock; found growing in alpine scree at 15,500 feet altitude.

83996. HYDRANGEA sp. Hydrangeaceae.

No. 18229. Karadi, east of Kulu, west of Yalung, southwestern Szechwan, September and October, 1929. A tree 15 to 20 feet high, with large cream-colored floral bracts; found in spruce forests at 11,500 feet altitude.

83997. HYDRANGEA sp. Hydrangeaceae.

No. 18231. Karadi, east of Kulu, west of Yalung, southwestern Szechwan, September and October, 1929. A tree 15 to 20 feet high, with cream-colored floral bracts which are smaller than those of the preceding number (No. 83996); found in a spruce forest at 11,000 feet altitude.

83998. INCARVILLEA sp. Bignoniaceae.

No. 18122. Yetsi, north of Kulu, September and October, 1929. A plant 3 feet tall; found in alpine meadows at 13,000 feet altitude.

83999 to 84002. IRIS spp. Iridaceae.

83999. IRIS sp.

No. 18201. Mount Kulu, September and October, 1929. A plant 3 feet tall, with very handsome blackish blue flowers; found in wet alpine meadows at 14,000 feet altitude.

84000. IRIS sp.

No. 18203. Kulu Mountains, September and October, 1929. A plant with bluish purple flowers; found in alpine meadows in forest clearings at 13,500 feet altitude.

83957 to 84251—Continued.

84001. IRIS sp.

No. 18235. Forests of Karadi, east of Kulu, September and October, 1929. A plant 2 feet high with large bluish purple flowers; found in spruce forests at 11,000 feet altitude.

84002. IRIS sp.

No. 18236. Karadi, September and October, 1929. A plant with purple flowers; found in forests at 11,000 feet altitude.

84003. (Undetermined.)

No. 18263.

84004. LIGUSTRUM sp. Oleaceae. **Privet.**

Likiang Snow Range, November, 1929. A shrub 10 to 15 feet high, with small leaves, fragrant white flowers, and small bluish black fruits.

84005 to 84009. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

84005. LONICERA sp.

No. 18249, Mount Mitzuga, Muli, Szechwan Province, September and October, 1929. Shrubs 3 to 4 feet high, with yellow flowers and black fruits; collected in alpine meadows at 13,000 feet altitude.

84006. LONICERA sp.

No. 18221. Mountains of Kulu, Szechwan Province, September and October, 1929. A shrub 4 to 6 feet high, with yellow flowers; found along streams at 13,000 feet altitude.

84007. LONICERA sp.

No. 18245. Mount Mitzuga, Muli, Szechwan Province, September and October, 1929. A shrub 1 foot high, with large yellow flowers; found on mountain slopes at 13,500 feet altitude.

84008. LONICERA sp.

No. 18247. Mount Mitzuga, Muli, Szechwan Province, September and October, 1929. A shrub 1 to 2 feet high; found on alpine slopes at 14,500 feet altitude.

84009. LONICERA sp.

No. 18479. Mount Fuchuan, Yunnan Province, October, 1929. A shrub 4 to 5 feet high, with bluish black fruits; found in spruce and fir forests at 13,000 feet altitude.

84010. MAGNOLIA sp. Magnoliaceae.

No. 18340. East of the Mekong and west of Weihsi, Yunnan Province, October, 1929. A spreading tree, 30 to 40 feet high, with very handsome white flowers; found in forests at 11,000 feet altitude.

84011 to 84019. MECONOPSIS spp. Papaveraceae.

84011. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. **Yellow Chinese-poppy.**

Likiang Snow Range, November, 1929. A yellow poppy found in alpine meadows at 13,000 feet altitude.

For previous introduction see No. 58374.

84012. MECONOPSIS sp.

83957 to 84251—Continued.

No. 18129. Southwestern Szechwan Province, west of the Yalung River, in Muli territory, on Mount Siga, northwest of Kulu Monastery, September and October, 1929. A spiny plant with deep-blue flowers; found on gravelly alpine slopes at 14,500 feet altitude.

84013. MECONOPSIS sp.

No. 18241. Western slopes of Mount Mitzuga, back of Muli Monastery, Szechwan Province, September and October, 1929. A plant with large yellow flowers, resembling *M. integrifolia;* found in alpine meadows at 13,500 feet altitude.

84014. MECONOPSIS sp.

No. 18258. Mount Mitzuga, Szechwan Province, September and October, 1929. A plant with dark-blue single flowers; found in alpine meadows at 14,500 feet altitude.

84015. MECONOPSIS sp.

No. 18267. Mount Mitzuga, Szechwan Province, September and October, 1929. A plant with deep-blue flowers; found on alpine screes at 15,000 feet altitude.

84016. MECONOPSIS sp.

No. 18361. Mount Fuchuan, Yunnan Province, October, 1929. A plant with dark-blue flowers; found in alpine meadows at 14,500 feet altitude.

84017. MECONOPSIS sp.

No. 18363. Mount Fuchuan, Yunnan Province, October, 1929. A plant with blue flowers; found in gravel and scree at 15,000 feet altitude.

84018. MECONOPSIS sp.

No. 18364. Mount Fuchuan, Yunnan Province, October, 1929. A plant with lyrate spiny leaves and large blue flowers; found in gravel and scree at 15,000 feet altitude.

84019. MECONOPSIS sp.

Likiang Snow Range, Yunnan Province, November, 1929. A plant with blue flowers; found on scree and gravel at 14,500 feet altitude.

84020. NOMOCHARIS PARDANTHINA Franch. Liliaceae.

No. 18368. Mount Fuchuan, Yunnan Province, October, 1929. A beautiful liliaceous plant with large white flowers 3 inches across, which are spotted with purple; found in a scrub forest at 11,000 feet altitude.

84021. OLEA sp. Oleaceae. **Olive.**

No. 18348. Mount Fuchuan, west of the Mekong River and west of Weishi, northwestern Yunnan, on the Mekong-Salwin Divide, October, 1929. A large tree, 40 to 50 feet high; found on dry slopes.

84022. PAEONIA sp. Ranunculaceae. **Peony.**

Likiang Snow Range, Yunnan Province, November, 1929. A shrub 5 feet high, with deep carmine to blackish red single flowers; found on gravelly slopes at 12,500 feet altitude.

84023. PICEA LIKIANGENSIS (Franch.) E. Pritz. Pinaceae. **Spruce.**

83957 to 84251—Continued.

No. 18526. Eastern slopes of the Likiang Snow Range, Yunnan Province, November, 1929. A tree from 50 to 100 feet high, with very small (aciculate) glaucous needles and oblong, slender, drab-colored cones; found at 11,500 feet altitude.

84024. PICEA sp. Pinaceae. **Spruce.**

No. 18489. Eastern slopes of the Likiang Snow Range, Yunnan Province, November, 1929. A tree 40 to 50 feet high, with very short dark-green small needles and ovate short cones; found in the forests of Gaba, north of Likiang, at 11,000 feet altitude.

84025. PICEA sp. Pinaceae. **Spruce.**

No. 18490. Eastern slopes of the Likiang Snow Range, Yunnan Province, November, 1929. A tree 50 to 60 feet high, with needles larger than the preceding (No. 84024) and cones very much larger; found in the forests of Gaba, north of Likiang, at 11,000 feet altitude.

84026. PIERIS sp. Ericaceae.

Eastern slopes of the Likiang Snow Range, Yunnan Province, November, 1929. A handsome shrub, 5 to 8 feet high, with erect branches, elliptical leaves, and spikes of white flowers; found at altitudes between 10,000 and 11,000 feet on dry slopes growing with *Pinus sinensis*.

84027. PINUS ARMANDI Franch. Pinaceae. **Armand pine.**

Likiang Snow Range, Yunnan Province, November, 1929. A tall pine 60 to 100 feet high, with trunks often 6 feet in diameter; found growing between 9,000 and 10,000 feet altitude, in moist regions. It is well adapted to San Franciscan, Oregon, and the redwood belt.

84028 to 84047. PRIMULA spp. Primulaceae. **Primrose.**

84028. PRIMULA FORRESTII Balf. f.

Likiang Snow Range, Yunnan Province, November, 1929. A very handsome woody perennial with orange-yellow flowers and leaves having the fragrance of apples; found on dry limestone cliffs at 11,000 feet altitude. The plant is said to live for 100 years.

For previous introduction see No. 59710.

84029. PRIMULA sp.

No. 17401. Drunisregouka, north of Kulu, in the Yetse Valley, Szechwan Province, September and October, 1929. A small woody Primula, related to the group to which *P. forresti* belongs, but very distinct. The large, deep-orange flowers are single, on short peduncles, and droop; the leaves are smaller and darker green; found at 10,000 feet altitude.

Nos. 84030 to 84038 were collected in southwestern Szechwan Province, west of the Yalung River, in Muli territory, on Mount Siga, northeast of Kulu Monastery, September and October, 1929.

84030. PRIMULA sp.

No. 18120. A plant with purple flowers; found in alpine meadows at 14,000 feet altitude.

83957 to 84251—Continued.

84031. PRIMULA sp.

No. 18123. A plant with flowers so deep blue as to be almost indigo; found in alpine meadows at 13,500 feet altitude.

84032. PRIMULA sp.

No. 18124. A primula with white flowers; found in alpine meadows at 13,500 feet altitude.

84033. PRIMULA sp.

No. 18128. A primula with yellow flowers; found in alpine meadows at 14,500 feet altitude.

84034. PRIMULA sp.

No. 18134. A primula with large single bluish purple flowers; found in alpine meadows at 14,000 feet altitude.

84035. PRIMULA sp.

No. 18137. A primula with pink flowers; found in alpine meadows at 13,500 feet altitude.

84036. PRIMULA sp.

No. 18145. A primula with flowers which vary from pinkish purple to blue; found on crags at 14,500 feet altitude.

84037. PRIMULA sp.

No. 18146. A plant with reddish purple flowers; found in swampy meadows between 12,000 and 12,500 feet altitude.

84038. PRIMULA sp.

No. 18151. One of the largest and handsomest primulas of the entire region. The mauve-pink to bluish lavender flowers, the size of a half dollar, have white calices and grow in large umbels. The leaves are white beneath. Found in mossy rhododendron and open fir forests at 14,500 feet altitude.

84039. PRIMULA sp.

No. 18198. Mountains of Kulu, in eastern Muli territory, but west of Yalung and north of the Litang River, September and October, 1929. A primula with yellow flowers; found along brooks and in swampy meadows at 14,000 feet altitude.

84040. PRIMULA sp.

No. 18210. Mountains of Kulu, in eastern Muli territory, but west of Yalung and north of the Litang River, September and October, 1929. The blue flowers are in long spikes with carmine calices; found in alpine meadows between 12,000 and 14,000 feet altitude.

84041. PRIMULA sp.

No. 18242. Mount Mitzuga, Muli, Szechwan Province, September and October, 1929. A plant 2 feet high, with large mauve-pink to blue flowers the size of a half dollar; found in mossy fir and rhododendron forests at 13,500 to 14,000 feet altitude.

84042. PRIMULA sp.

No. 18264. Mount Mitzuga, Muli, Szechwan Province, September and October, 1929. A plant with very handsome bluish pink flowers; found on dry banks in pine forests at 12,000 feet altitude.

83957 to 84251—Continued.

Nos. 84043 to 84046 were collected on Mount Fuchuan, west of the Mekong River and west of Weihsi, northwestern Yunnan, on the Mekong-Salwin Divide, October, 1929.

84043. PRIMULA sp.

No. 18360. A primula with large indigo-blue flowers; found in alpine meadows at 14,000 feet altitude.

84044. PRIMULA sp.

No. 18362. A primula with large leaves and dark-blue flowers; found in alpine meadows at 14,500 feet altitude.

84045. PRIMULA sp.

No. 18374. A primula with reddish purple flowers and dentate leaves which are yellow beneath; found in alpine meadows at 14,500 feet altitude.

84046. PRIMULA sp.

No. 18392. A primula with yellow flowers; found in alpine meadows at 14,500 feet altitude.

84047. PRIMULA sp.

No. 18401. Mount Sitsa, west of the Mekong and north of Weishi, September and October, 1929. A primula with large blue flowers found in the Salwin Valley in a mossy fir forest at 13,000 feet altitude.

84048. PRUNUS MAJESTICA Koehne. Amygdalaceae.

No. 18256. Muli, September and October, 1929. A cherry tree 20 feet high, with pink flowers; found in spruce forests at 11,500 feet altitude.

84049. RHEUM ALEXANDRAE Batal. Polygonaceae. **Rhubarb.**

No. 18200. Kulu Mountains, September and October, 1929. A handsome plant 2 to 3 feet tall, with large cream-colored bracts; found in swampy alpine meadows at 14,500 feet altitude.

84050 to 84215. RHODODENDRON spp. Ericaceae.

84050. RHODODENDRON HELIOLEPIS Franch.

From the Likiang Snow Range, Yunnan.

For previous introduction see No. 59715.

84051 to 84073. Mount Siga, southwestern Szechwan, September and October, 1929.

84051. RHODODENDRON sp.

No. 18119. A shrub 10 to 12 feet high, with purplish pink flowers; found in forests at 14,000 feet altitude.

84052. RHODODENDRON sp.

No. 18125. An ornamental herb with pale purple flowers; found in alpine meadows at 13,500 feet altitude.

84053. RHODODENDRON sp.

No. 18138. A shrub or small tree 10 to 15 feet high, with white flowers; found on alpine slopes at 14,500 feet altitude.

84054. RHODODENDRON sp.

No. 18139. A shrub 5 to 8 feet high; found on alpine slopes at 14,500 feet altitude.

83957 to 84251—Continued.

84055. RHODODENDRON sp.

No. 18140. A shrub 4 to 5 feet high, with pale-purple flowers; found on forested slopes at 13,000 feet altitude.

84056. RHODODENDRON sp.

No. 18141. A shrub 6 to 10 feet high, with pink flowers; found in alpine meadows at 14,500 feet altitude.

84057. RHODODENDRON sp.

No. 18142. A shrub or small tree 8 to 10 feet high, flowers not seen; found in alpine regions among rocks at 14,500 feet altitude.

84058. RHODODENDRON sp.

No. 18143. A shrub 1 to 2 feet high, with deep purplish blue flowers; found in alpine regions among rocks at 14,500 feet altitude.

84059. RHODODENDRON sp.

No. 18144. A shrub 1 to 2 feet high, with rich-yellow flowers; found on alpine slopes at 15,000 feet altitude.

84060. RHODODENDRON sp.

No. 18149. A tree 10 to 20 feet high, with very large purple flowers; found in fir forests at 14,000 feet altitude.

84061. RHODODENDRON sp.

No. 18150. A shrub 10 feet high; found in alpine regions among bowlders.

84062. RHODODENDRON sp.

No. 18152. A shrub 6 feet high; found in alpine regions at 15,000 feet altitude.

84063. RHODODENDRON sp.

No. 18153. A small tree 10 to 12 feet high, with purplish red flowers; found in alpine regions at 15,000 feet altitude.

84064. RHODODENDRON sp.

No. 18155. A compact shrub, 4 to 5 feet high, with white flowers; found in alpine regions at 15,000 feet altitude.

84065. RHODODENDRON sp.

No. 18156. A small tree 8 to 10 feet high, with pink flowers; found in fir forests at 14,500 feet altitude.

84066. RHODODENDRON sp.

No. 18157. A compact shrub 5 to 6 feet high, with pink flowers; found among limestone and crags at 15,000 feet altitude.

84067. RHODODENDRON sp.

No. 18158. A shrub or small tree 10 to 15 feet high, with purple flowers; found in fir forests at 14,500 feet altitude.

84068. RHODODENDRON sp.

No. 18159. A shrub 5 to 10 feet high, with large white flowers; found in fir forests at 14,500 feet altitude.

84069. RHODODENDRON sp.

No. 18160. A shrub 4 to 6 feet high, with purple flowers; found among bowlders at 15,000 feet altitude.

83957 to 84251—Continued.

84070. RHODODENDRON sp.

No. 18161. A shrub 6 to 8 feet high, with pink flowers; found forming thickets in alpine regions at 14,600 feet altitude.

84071. RHODODENDRON sp.

No. 18162. A shrub 5 to 8 feet high, with pink flowers; found in rhododendron forests at 14,500 feet altitude.

84072. RHODODENDRON sp.

No. 18163. A shrub 1 foot high, with deep reddish purple to purplish blue flowers; found among rocks at 15,000 feet altitude.

84073. RHODODENDRON sp.

No. 18164. A shrub 6 to 8 feet high, with purple flowers; found in alpine regions at 15,000 feet altitude.

84074. RHODODENDRON sp.

No. 18168. A shrub 6 to 8 feet high, with white flowers; found in a spruce forest on the mountains of Kulu at 13,500 feet altitude.

84075. RHODODENDRON sp.

No. 18169. A tree 25 feet tall; found in fir forests at 14,500 feet altitude.

84076. RHODODENDRON sp.

No. 18170. A tree 10 feet tall with purplish flowers; found on the mountains of Kulu in fir forests at 14,500 feet altitude.

84077. RHODODENDRON sp.

No. 18171. A small tree 15 to 18 feet high, with white flowers growing above fir forests in a rhododendron forest at 15,000 feet altitude in the mountains of Kulu.

84078. RHODODENDRON sp.

No. 18172. A shrub 6 to 8 feet high, with thick brown leaves, woolly beneath, and white flowers. Found in the alpine regions of the mountains of Kulu at 15,000 feet altitude.

84079. RHODODENDRON sp.

No. 18173. A tree 10 to 15 feet high, with purplish pink flowers; found in fir forests in the mountains of Kulu at 14,500 feet altitude.

84080. RHODODENDRON sp.

No. 18174. A shrub 4 to 5 feet high, with white flowers; found in alpine regions in the Kulu Mountains at 15,000 feet altitude.

84081. RHODODENDRON sp.

No. 18175. A shrub 6 to 8 feet high, with pink flowers; found in the alpine regions of the Kulu Mountains.

84082. RHODODENDRON sp.

No. 18176. A shrub 6 to 8 feet high, with pink flowers; found in alpine regions at 15,000 feet altitude.

84083. RHODODENDRON sp.

No. 18177. A shrub 4 to 5 feet high, with pink flowers; found in fir forests on the Kulu Mountains at 14,500 feet altitude.

83957 to 84251—Continued.

84084. RHODODENDRON sp.

No. 18178. A shrub 6 to 8 feet high, with pink flowers; found in the mountains of Kulu at 14,500 feet altitude.

84085. RHODODENDRON sp.

No. 18179. A shrub 8 to 10 feet high, with white flowers; found in the alpine regions of the mountains of Kulu at 15,000 feet altitude.

84086. RHODODENDRON sp.

No. 18180. A shrub 10 feet high, with white flowers; found in a rhododendron forest at 15,000 feet altitude in the mountains of Kulu.

84087. RHODODENDRON sp.

No. 18181. A small shrub, 2 feet high, with white flowers; found in the alpine regions of the mountains of Kulu at 14,500 feet altitude.

84088. RHODODENDRON sp.

No. 18182. A shrub 10 feet high, with white flowers; found at 15,000 feet altitude in the alpine regions of the Kulu Mountains.

84089. RHODODENDRON sp.

No. 18185. A shrub or small tree 10 to 15 feet high, with pink flowers; found in fir forests on the Kulu Mountains at 14,000 feet altitude.

84090. RHODODENDRON sp.

No. 18186. A shrub 4 to 5 feet high, with pinkish flowers; found in the alpine regions of the Kulu Mountains at 15,000 feet altitude.

84091. RHODODENDRON sp.

No. 18187. A small shrub, 2 feet high, with yellowish pink flowers; found in the alpine regions of the Kulu Mountains at 15,000 feet altitude.

84092. RHODODENDRON sp.

No. 18189. A shrub 8 to 10 feet high, with pinkish purple flowers; found in spruce forests on the Kulu Mountains at 13,500 feet altitude.

84093. RHODODENDRON sp.

No. 18222. A small shrub 2 feet high, with dark blue flowers; found at 13,500 feet altitude in the alpine regions of the Kulu Mountains.

84094. RHODODENDRON sp.

No. 18223. A small shrub 1 to 2 feet high, with reddish purple flowers, found in alpine regions between 13,500 and 14,000 feet altitude.

84095. RHODODENDRON sp.

No. 18224. A shrub 2 feet high, with dark-blue flowers; found between 13,500 and 14,000 feet altitude in the alpine regions of the mountains of Kulu.

84096. RHODODENDRON sp.

No. 18226. A shrub or small tree 10 to 12 feet high; found in hemlock forests at 11,500 feet altitude on Karadi, east of Kulu.

84097. RHODODENDRON sp.

No. 18227. A shrub or small tree 10 to 12 feet high, with large yellow

83957 to 84251—Continued.

flowers; found in the spruce forests of Karadi east of Kulu Monastery and west of Yalung at 11,500 feet altitude.

84098. RHODODENDRON sp.

No. 18228. A shrub 6 to 8 feet high, with leaves, petioles, and pedicels covered with red hairs; found in spruce forests of Karadi, east of Kulu, at 11,500 feet altitude.

84099. RHODODENDRON sp.

No. 18234. A tree 15 to 25 feet high; the leaves, 2 feet long, are dark green above and chocolate colored beneath; the large, exceedingly handsome flowers are a rich pink. Found in the forests of Karadi at 11,500 feet altitude.

84100. RHODODENDRON sp.

No. 18275. A very handsome shrub 3 to 5 feet high, with flowers varying from white to pink, bluish pink, and purple; found on dry slopes in pine forests as undergrowth, also found in the open country of Sili at 11,000 feet altitude, on the northern slopes of Mount Gibboh and south of Muli.

84101. RHODODENDRON sp.

No. 18277. A shrub 4 to 5 feet high, with pink flowers; found in the alpine regions of Kulu at 15,000 feet altitude.

84102. RHODODENDRON sp.

No. 18281. A small tree, 15 feet high, with pink flowers and leaves which are silvery beneath; found north of Tokesher in the Yangtze loop, northwestern Yunnan, at 11,000 feet altitude.

84103 to 84141. From Mount Fuchuan, west of the Mekong River and west of Weihsi, northwestern Yunnan, on the Mekong-Salwin Divide, October, 1929.

84103. RHODODENDRON sp.

No. 18331. A tree 30 feet high, with leaves several feet long and silvery beneath, and large yellow flowers in huge corymbs the size of a man's head; found at 12,500 feet altitude.

84104. RHODODENDRON sp.

No. 18332. A shrub 7 to 8 feet high, with glabrous leaves and yellow flowers; found in forests at 12,000 feet altitude.

84105. RHODODENDRON sp.

No. 18333. A shrub 6 to 8 feet high, with elliptical leaves and yellow flowers; found in forests at 12,000 feet altitude.

84106. RHODODENDRON sp.

No. 18336. A tree 15 to 20 feet high, with large elliptical leaves which are brown beneath and large yellow flowers; found in forests at 12,000 feet altitude.

84107. RHODODENDRON sp.

No. 18337. A tree 15 to 20 feet high, with large leaves which are brown beneath and very large yellow flowers; found in forests at 12,000 feet altitude.

83957 to 84251—Continued.

84108. RHODODENDRON sp.

No. 18338. A tree 10 to 15 feet high, with oblong leaves, fawn colored beneath and pale yellow flowers; found in forests at 12,000 feet altitude.

84109. RHODODENDRON sp.

No. 18339. A tree 10 to 15 feet high, with elliptical leaves, brown beneath, and pink flowers; found in forests at 12,000 feet altitude.

84110. RHODODENDRON sp.

No. 18341. A small shrub 2 feet high, with elliptical leaves which are glaucous beneath and white flowers; found in forests at 12,500 feet altitude.

84111. RHODODENDRON sp.

No. 18350. A shrub 10 feet high, with pink flowers and broadly elliptic oblong leaves; found at an altitude of 13,000 feet.

84112. RHODODENDRON sp.

No. 18351. A shrub 8 to 10 feet high, with blue flowers; found in alpine regions at 13,000 feet altitude.

84113. RHODODENDRON sp.

No. 18352. A shrub 1 foot high, with pink flowers and small elliptic glabrous leaves; found in alpine regions at 13,000 feet altitude.

84114. RHODODENDRON sp.

No. 18353. A shrub 8 to 10 feet high, with dark-green leaves and yellow flowers; found in alpine regions at 13,500 feet altitude.

84115. RHODODENDRON sp.

No. 18354. A shrub 2 to 3 feet high, with pink flowers; found in alpine regions at 13,500 feet altitude.

84116. RHODODENDRON sp.

No. 18355. A shrub 3 to 4 feet high, with pink flowers; found in alpine regions at 13,500 feet altitude.

84117. RHODODENDRON sp.

No. 18356. A shrub 2 to 4 feet high, with pink flowers; found in alpine regions at 13,500 feet altitude.

84118. RHODODENDRON sp.

No. 18357. A shrub 2 to 4 feet high, with rich-red flowers; found in alpine regions at 13,500 feet altitude.

84119. RHODODENDRON sp.

No. 18359. A shrub 5 to 6 feet high, with deep reddish to black flowers; found in alpine regions at 13,000 feet altitude.

84120. RHODODENDRON sp.

No. 18365. A small shrub 1 to 2 feet high, with dark-blue flowers; found in alpine regions at 14,500 feet altitude.

83957 to 84251—Continued.

84121. RHODODENDRON sp.

No. 18366. A shrub 4 to 6 feet high, with white flowers and dense woolly brown leaves; found in alpine regions at 14,500 feet altitude.

84122. RHODODENDRON sp.

No. 18367. A small shrub 2 to 3 feet high, with large purplish red flowers; found in alpine meadows among bowlders at 14,500 feet altitude.

84123. RHODODENDRON sp.

No. 18369. A shrub 6 to 8 feet high, with yellow flowers; found in alpine regions at 13,500 feet altitude.

84124. RHODODENDRON sp.

No. 18373. A shrub 4 to 6 feet high, with yellow flowers; found in alpine regions at 14,000 feet altitude.

84125. RHODODENDRON sp.

No. 18375. A shrub 6 to 8 feet high, with pink flowers; found in alpine regions at 14,500 feet altitude.

84126. RHODODENDRON sp.

No. 18376. A shrub 6 to 8 feet high, with pink flowers; found in alpine regions at 14,500 feet altitude.

84127. RHODODENDRON sp.

No. 18377. A shrub 5 to 6 feet high, with yellow flowers; found in alpine regions at 14,500 feet altitude.

84128. RHODODENDRON sp.

No. 18378. A shrub 6 to 8 feet high, with red flowers; found in alpine regions at 14,500 feet altitude.

84129. RHODODENDRON sp.

No. 18379. A shrub 3 to 5 feet high, with red flowers; found in alpine regions at 14,500 feet altitude.

84130. RHODODENDRON sp.

No. 18380. A shrub 2 to 3 feet high, with purple flowers; found in alpine regions at 14,500 feet altitude.

84131. RHODODENDRON sp.

No. 18381. A shrub 1 to 3 feet high, with purple flowers; found in alpine regions at 14,000 feet altitude.

84132. RHODODENDRON sp.

No. 18382. A shrub 5 to 6 feet high, with dark-red flowers; found in alpine regions at 14,000 feet altitude.

84133. RHODODENDRON sp.

No. 18383. A shrub 6 to 8 feet high, with yellow flowers; found in alpine regions at 14,000 feet altitude.

84134. RHODODENDRON sp.

No. 18384. A shrub or small tree 15 to 18 feet high, with large purple flowers; found in spruce forests at 13,500 feet altitude.

83957 to 84251—Continued.

84135. RHODODENDRON sp.

No. 18385. A tree 15 to 18 feet high, with large white flowers and leaves which are drab colored when young and white beneath when they are old; found in spruce forests at 13,500 feet altitude.

84136. RHODODENDRON sp.

No. 18386. A tree 15 to 16 feet high, with red flowers and hairy petioles; found in spruce forests at 12,000 feet altitude.

84137. RHODODENDRON sp.

No. 18387. A shrub 6 to 10 feet high, with red (?) flowers; found in spruce forests at 12,000 feet altitude.

84138. RHODODENDRON sp.

No. 18388. A shrub 2 to 3 feet high, with small yellow flowers; found in a canebrake at 13,000 feet altitude.

84139. RHODODENDRON sp.

No. 18389. A shrub 1 to 2 feet high, with pink flowers; found in alpine regions at 14,500 feet altitude.

84140. RHODODENDRON sp.

No. 18390. A tree 25 feet high, with large yellow flowers and rust-red fruits. The large leaves are rust red beneath. Found in rhododendron forests at 14,500 feet altitude.

84141. RHODODENDRON sp.

No. 18391. A tree 15 to 20 feet high, with large pink flowers and large obovate oblong leaves which are red brown beneath; found in alpine regions at 14,500 feet altitude.

84142 to 84164. From Mount Sitsa, west of the Mekong River and north of Weihsi, northwestern Yunnan, September and October, 1929.

84142. RHODODENDRON sp.

No. 18395. (Flowering specimen No. 17054.) A shrub 3 to 5 feet high, with yellow flowers and oval glaucous leaves which are glabrous beneath; found in spruce forests at 12,000 feet altitude.

84143. RHODODENDRON sp.

No. 18396. (Flowering specimen No. 17052.) A tree 15 to 18 feet high, with large pink flowers and large leaves which are pale brown beneath; found in alpine regions at 14,000 feet altitude.

84144. RHODODENDRON sp.

No. 18397. (Flowering specimen No. 17053.) A tree 25 feet high, with yellow flowers and large leaves which are pale brown beneath; found in alpine regions at 14,000 feet altitude.

84145. RHODODENDRON sp.

No. 18399. A tree 6 to 8 feet high, with very large white flowers and large ovate-oblong leaves which are grayish black beneath and have prominent veins; found on a forest slope at 10,000 feet altitude.

83957 to 84251—Continued.

84146. RHODODENDRON sp.

No. 18400. A shrub 6 to 10 feet high, with white flowers and rich-green elliptical leaves which are gray beneath; found in forests at 10,000 feet altitude.

84147. RHODODENDRON sp.

No. 18402. A tree or shrub 8 to 10 feet high, with white flowers and lanceolate leaves which are brown tomentose beneath; found at 12,500 feet altitude.

84148. RHODODENDRON sp.

No. 18403. (Flowering specimen No. 17070.) A tree 25 feet high, with red flowers and elliptical leaves; found in open forests at 12,500 feet altitude.

84149. RHODODENDRON sp.

No. 18404. (Flowering specimen No. 17088.) A shrub 8 to 10 feet high, with large ovate leaves and large white flowers; found at 12,000 feet altitude.

84150. RHODODENDRON sp.

No. 18405. A shrub 5 to 8 feet high, with suborbicular thin glabrous leaves and yellow flowers; found in alpine regions at 13,500 feet altitude.

84151. RHODODENDRON sp.

No. 18406. (Flowering specimen No. 17096.) A small shrub 4 feet high, with deep blackish red flowers and obovate leaves which are brown woolly beneath; found in alpine regions at 14,500 feet altitude.

84152. RHODODENDRON sp.

No. 18407. (Flowering specimen No. 17081.) A small tree 10 to 12 feet high, with large white flowers and large oblong, pale-green leaves which are pale brown beneath; found at 12,500 feet altitude.

84153. RHODODENDRON sp.

No. 18408. (Flowering specimen No. 17078.) A shrub 2 to 4 feet high, with small elliptical dark gray leaves and pale red to purplish flowers; found at 12,500 feet altitude.

84154. RHODODENDRON sp.

No. 18409. (Flowering specimen No. 17060.) A small shrub 2 to 5 feet high, with linear leaves, gray beneath, and small yellow flowers.

84155. RHODODENDRON sp.

No. 18410. A shrub 6 to 8 feet high, with white flowers; found in spruce forests at 12,000 feet altitude.

84156. RHODODENDRON sp.

No. 18411. (Flowering specimen No. 17066.) A small tree 10 feet high, with elliptical leaves which are gray drab beneath and white flowers; found in forests at 12,000 feet altitude.

84157. RHODODENDRON sp.

No. 18412. (Flowering specimen No. 17093.) A shrub 3 to 4 feet high, with small lanceolate leaves, gray beneath, and white flowers; found in alpine regions between 13,500 and 14,000 feet altitude.

84158. RHODODENDRON sp.

No. 18413. A shrub 2 to 4 feet high, with narrow linear leaves, dark gray beneath, and red flowers; found in forests at 12,500 feet altitude.

84159. RHODODENDRON sp.

No. 18415. (Flowering specimen No. 17095.) A shrub 5 to 6 feet high, found in alpine regions at 14,000 feet altitude.

84160. RHODODENDRON sp.

No. 18416. A shrub 5 to 6 feet high, with glabrous leaves and pink flowers, found in alpine regions at 13,500 feet altitude.

84161. RHODODENDRON sp.

No. 18418. A shrub 6 feet high, with pink flowers; found in forests at 11,000 feet altitude.

84162. RHODODENDRON sp.

No. 18420. A small tree 10 to 12 feet high, with leaves, petioles, and peduncles covered with red hairs and red flowers; found in forests at 12,000 feet altitude.

84163. RHODODENDRON sp.

No. 18421. A small shrub 2 to 4 feet high, with small elliptical pale-green leaves and large white flowers on slender peduncles; found on dry, open slopes at 12,500 feet altitude.

84164. RHODODENDRON sp.

No. 18424. A shrub 2 to 4 feet high, with leathery leaves, woolly beneath, which have veins deeply impressed and large white flowers with a brown woolly calyx; often epiphytic on fir trees at 12,500 feet altitude.

84165 to 84186. From Mount Tapao, between Weihsi and the Mekong River, northwestern Yunnan, September and October, 1929.

84165. RHODODENDRON sp.

No. 18433. A tree 15 to 18 feet high, with large oblong leaves, brown beneath, and pale pink flowers; found in forests at 12,500 feet altitude.

84166. RHODODENDRON sp.

No. 18434. A shrub 6 to 8 feet high, found in spruce forests at 11,000 feet altitude.

84167. RHODODENDRON sp.

No. 18435. A shrub 2 feet high, with pure-white flowers and linear leaves having revolute margins; found on the summit of a spur at 13,500 feet altitude.

84168. RHODODENDRON sp.

No. 18436. A shrub 4 to 6 feet high, with pale-yellow flowers and elliptical leaves which are densely dark rufous tomentose; found in alpine regions at 13,500 feet altitude.

83957 to 84251—Continued.

84169. RHODODENDRON sp.

No. 18437. A shrub 8 to 10 feet high, with white flowers and elliptic-oblong leaves covered with pale-brown tomentum beneath; found in alpine regions at 13,500 feet altitude.

84170. RHODODENDRON sp.

No. 18438. A shrub 5 to 6 feet high, with oblong, cordate leaves and rich pink flowers; found in alpine regions at 14,500 feet altitude.

84171. RHODODENDRON sp.

No. 18439. A shrub 5 to 7 feet high, with white flowers and oval leaves which are rust brown beneath; found in alpine regions at 14,500 feet altitude.

84172. RHODODENDRON sp.

No. 18440. A tree 10 to 15 feet high, with large oblong subglabrous leaves and pale pink flowers in large globose corymbs; found in fir forests at 12,500 feet altitude.

84173. RHODODENDRON sp.

No. 18441. A shrub 6 to 8 feet high, with white flowers; found in alpine regions at 14,000 feet altitude.

84174. RHODODENDRON sp.

No. 18442. A small shrub 1 to 2 feet high, with small oval glabrous leaves and purplish blue flowers; found in alpine meadows at 14,000 feet altitude.

84175. RHODODENDRON sp.

No. 18443. A tree 12 to 15 feet high, with white flowers and large leaves, glaucous above and covered with fine tomentum beneath; found in alpine regions at 13,500 feet altitude.

84176. RHODODENDRON sp.

No. 18444. A shrub 6 to 8 feet high, with ovate oblong acute leaves, finely tomentose beneath, and large white flowers; found in alpine regions at 14,500 feet altitude.

84177. RHODODENDRON sp.

No. 18445. (Received without notes.)

84178. RHODODENDRON sp.

No. 18446. A shrub 5 to 7 feet high, with oblong cordate leaves and rich pink flowers; found in alpine regions at 14,500 feet altitude.

84179. RHODODENDRON sp.

No. 18447. A tree 15 to 18 feet high, with large white flowers, rich green oblong leaves, alternate at the base and covered with brown tomentum beneath; found in alpine regions at 14,000 feet altitude.

84180. RHODODENDRON sp.

No. 18448. A shrub 5 to 6 feet high, with purplish red flowers, broadly oblong leaves, cordate at the base, and matted with a grayish tomentum; found in alpine regions at 14,500 feet altitude.

83957 to 84251—Continued.

84181. RHODODENDRON sp.

No. 18449. A tree 15 to 18 feet high, with large red flowers and long lanceolate leaves with hirsute petioles and margins; found in fir forests at 12,500 feet altitude.

84182. RHODODENDRON sp.

No. 18450. A small shrub about a foot high, with small elliptical leaves, gray beneath, and large purplish blue flowers; found in alpine regions at 14,000 feet altitude.

84183. RHODODENDRON sp.

No. 18451. A tree 15 to 20 feet high, with large oblong-obovate leaves covered with rich brown tomentum beneath, and large white flowers; found in fir forests at 12,500 feet altitude.

84184. RHODODENDRON sp.

No. 18452. A tree 25 feet high, with large purplish red flowers and large oblong leaves covered with rufous tomentum beneath; found in fir forests at 12,500 feet altitude.

84185. RHODODENDRON sp.

No. 18453. A shrub 1 to 2 feet high, with small elliptical leaves which are dark brown beneath, and deep bluish purple flowers with a dark carmine calyx; found in alpine regions at 14,000 feet altitude.

84186. RHODODENDRON sp.

No. 18454. A shrub 2 feet high, found in alpine meadows at 14,000 feet altitude.

84187 to 84192. From Mount Hung Myai, north of Litiping, Yangtze-Mekong Divide, northwestern Yunnan, September and October, 1929.

84187. RHODODENDRON sp.

No. 18455. A shrub 8 to 10 feet high, with oblong, pale glabrous leaves and lemon-yellow flowers; found in spruce forests at 11,500 feet altitude.

84188. RHODODENDRON sp.

No. 18456. A shrub 8 to 10 feet high, with purple flowers and small oval glabrous leaves, acute at both ends; found in fir and spruce forests at 11,000 feet altitude.

84189. RHODODENDRON sp.

No. 18457. A shrub 5 to 8 feet high, with small elliptical, glabrous, cordate leaves and small pale blue flowers; found in spruce forests at 11,500 feet altitude.

84190. RHODODENDRON sp.

No. 18458. A shrub 1 to 2 feet high, with small narrow elliptical leaves, brown beneath, and blue flowers; found in alpine meadows at 11,000 feet altitude.

84191. RHODODENDRON sp.

No. 18459. A tree 15 to 18 feet high, with large, oblong leaves, red brown woolly beneath; found at the foot of cliffs in spruce forests at 12,000 feet altitude.

83957 to 84251—Continued.

84192. RHODODENDRON sp.

No. 18460. A shrub 2 to 3 feet high, with narrow elliptical leaves, dark brown beneath, and pale-blue flowers; found in alpine meadows at 11,500 feet altitude.

84193 to 84195. From Shanmakou, north of Weihsi and east of the Mekong River, northwestern Yunnan, September and October, 1929.

84193. RHODODENDRON sp.

No. 18462. A shrub 2 to 4 feet high, with pink flowers; found in alpine meadows at 14,000 feet altitude.

84194. RHODODENDRON sp.

No. 18463. A shrub 3 to 4 feet high, with red flowers and leaves covered beneath with dark-gray tomentum; found in alpine meadows at 13,500 feet altitude.

84195. RHODODENDRON sp.

No. 18464. A shrub 3 to 5 feet high, with red flowers and leaves white tomentose beneath; found in alpine meadows between 13,500 and 14,000 feet altitude.

84196 to 84200. From Shanmakou, west of Weihsi, northwestern Yunnan, September and October, 1929.

84196. RHODODENDRON sp.

No. 18465. A shrub 4 feet high, with linear leaves, brown woolly beneath, and deep-red flowers; found on dry slopes at 11,000 feet altitude.

84197. RHODODENDRON sp.

No. 18466. A shrub 3 to 5 feet high, with red flowers; found on mountain slopes at 10,500 feet altitude.

84198. RHODODENDRON sp.

No. 18467. A shrub 3 to 5 feet high, with linear lanceolate leaves, thickly matted with a woolly tomentum, and red flowers; found on slopes at 10,500 feet altitude.

84199. RHODODENDRON sp.

No. 18468. A shrub 2 to 4 feet high, with rich crimson flowers and linear lanceolate leaves covered beneath with a dirty white tomentum; found on slopes at 10,500 feet altitude.

84200. RHODODENDRON sp.

No. 18469. A shrub 2 to 4 feet high, with red flowers and linear lanceolate leaves covered beneath with pale brown tomentum.

84201. RHODODENDRON sp.

No. 18471. A shrub or small tree 10 feet high, with thin glabrous leaves, bright green on both sides, and pale pink flowers; found at the foot of Litiping, Yangtze-Mekong Divide, at 10,500 feet altitude.

84202. RHODODENDRON sp.

No. 18473. A shrub 2 to 5 feet high, with leaves bright green on both sides, and purplish red flowers; found west of Litiping at 10,500 feet altitude.

83957 to 84251—Continued.

84203 to 84206. From the alpine regions of Mount Sitsa, western slopes of the Salwin Valley, at 14,000 feet altitude.

84203. RHODODENDRON sp.

No. 18474. A tree 18 to 20 feet high, with oblong obovate leaves, brown to fawn colored flocculose beneath.

84204. RHODODENDRON sp.

No. 18475. A shrub 5 to 6 feet high, with dark-green leaves which are glaucous.

84205. RHODODENDRON sp.

No. 18476. A shrub 2 to 3 feet high, with dull-green glaucous leaves.

84206. RHODODENDRON sp.

No. 18477. A tree 10 to 15 feet high, with oblong acute leaves which are dull dark green above and dull brown beneath.

84207 to 84215. From the Likiang Snow Range, northwestern Yunnan, November, 1929.

84207. RHODODENDRON sp.

A tree 10 feet high, with glabrous leaves and pale-pink flowers; found on moist slopes at 11,000 feet altitude.

84208. RHODODENDRON sp.

A shrub 8 to 10 feet high, with small elliptical leaves and white flowers an inch long; found in spruce forests at 11,500 feet altitude.

84209. RHODODENDRON sp.

A shrub 3 to 4 feet high, with thick leathery leaves, brown beneath, and large pink flowers; found on rocky slopes at 14,500 feet altitude.

84210. RHODODENDRON sp.

A shrub 2 to 3 feet high, with very small leaves and blue flowers; found on cliffs at 13,000 feet altitude.

84211. RHODODENDRON sp.

A shrub 6 to 12 feet high, with glabrous leaves which are pale beneath, and pink flowers; found in fir forests at 12,500 feet altitude.

84212. RHODODENDRON sp.

A shrub 10 feet high, resembling *R. heliolepis*, with small dark-green leaves on bright-red petioles, and purple flowers; found on mountain slopes at 13,500 feet altitude.

84213. RHODODENDRON sp.

A shrub 2 to 4 feet high, with elliptical leaves and very large purplish blue flowers; found along a glacier stream.

84214. RHODODENDRON sp.

A tree 15 feet high, with glabrous leaves and large pink flowers; found in gorges between 11,000 and 15,000 feet altitude.

84215. RHODODENDRON sp.

A shrub 4 to 6 feet high, with rather large white flowers, tinged

83957 to 84251—Continued.

with pink; found at 14,500 feet altitude.

Nos. 84216 to 84221 came from Mount Mitzuga, Szechwan Province, September and October, 1929.

84216 to 84219. RIBES spp. Grossulariaceae.

84216. RIBES sp.

No. 18136. A shrub 4 to 5 feet high, found on mountain slopes at 13,000 feet altitude.

84217. RIBES sp.

No. 18251. A shrub 4 to 5 feet high, found in alpine regions at 13,500 feet altitude.

84218. RIBES sp.

No. 18252. A shrub 6 feet high, found in alpine regions at 13,500 feet altitude.

84219. RIBES sp.

No. 18253. A shrub 10 feet high, with large leaves and black fruits in drooping racemes; found in Muli forests at 13,000 feet altitude.

84220 to 84224. ROSA spp. Rosaceae. **Rose.**

84220. ROSA sp.

No. 18220. A shrub 6 to 8 feet high, with white flowers; found in the forests of Kulu at 13,000 feet altitude.

84221. ROSA sp.

No. 18232. A shrub 6 to 10 feet high, with red flowers; found in the forests of Karadi at 11,500 feet altitude.

84222. ROSA sp.

No. 18342. A shrub 2 feet high, with large leaves, pink flowers, and large red spiny fruits; found in a bamboo canebreak at 12,500 feet altitude on Mount Fuchuan in northwestern Yunnan, in October, 1929.

84223. ROSA sp.

No. 18430. A shrub 6 feet high, with large white flowers, the peduncles supported by deep purple bracts; found on dry slopes at 10,000 feet altitude on Mount Tapao, between Weihsi and the Mekong River, in northwestern Yunnan.

84224. ROSA sp.

No. 18431. A shrub 6 feet high, with red flowers which have green bracts; found on dry slopes at 10,000 feet altitude on Mount Tapao, between Weihsi and the Mekong River, northwestern Yunnan, in October, 1929.

84225. RUBUS sp. Rosaceae.

No. 18257. An erect shrub 3 to 4 feet high, with white flowers, and sweet, yellowish red fruits which are edible; found as undergrowth in clearings in the Muli forests at 12,000 feet elevation.

84226. SAUSSUREA sp. Asteraceae.

No. 18127. A composite with purple flowers, found in alpine meadows at 14,500 feet altitude on Mount Siga, September and October, 1929.

83957 to 84251—Continued.

84227. SAUSSUREA sp. Asteraceae.

No. 18278.

84228. SAXIFRAGA sp. Saxifragaceae. **Saxifrage.**

No. 18188. A plant 1 to 2 feet high, with deep-red flowers; found in alpine regions at 15,000 feet altitude in the mountains of Kulu.

84229. SAXIFRAGA sp. Saxifragaceae. **Saxifrage.**

A yellow flower, found growing in clumps on cliffs in the Likiang Snow Range at 11,000 feet altitude.

84230. SCHEFFLERA sp. Araliaceae.

No. 18270. A stout climber with orange fruits, found in Muli forests at 10,000 feet altitude.

84231. SCHIZANDRA sp. Magnoliaceae.

No. 18233. A climber, 30 to 40 feet high, with red flowers; found in the forests of Karadi at 11,500 feet altitude.

84232 to 84236. SORBUS spp. Malaceae. **Mountain-ash.**

84232. SORBUS sp.

No. 18190. A tree 10 to 20 feet high, with red flowers; found in spruce forests at 14,000 feet altitude in the mountains of Kulu.

84233. SORBUS sp.

No. 18191. A tree 20 to 25 feet high, with large leaves and white flowers; found in fir forests at 14,500 feet altitude in the mountains of Kulu.

84234. SORBUS sp.

No. 18192. A tree 15 to 20 feet high, with pale pink to white flowers; found in the spruce forests of Kulu at 13,500 feet altitude.

84235. SORBUS sp.

No. 18371. A shrub 10 feet high, with small red flowers and reddish fruits; found in alpine regions in the Fuchuan Mountains, west of Weihsi, at 14,000 feet altitude.

84236. SORBUS sp.

No. 18372. A tree 15 to 20 feet high, with red flowers and reddish fruits; found in alpine regions in the Fuchuan Mountains, west of Weihsi, at 14,000 feet altitude.

84237. SPIRAEA sp. Rosaceae. **Spirea.**

No. 18213. A shrub 5 feet high, with white flowers; found along streams at 12,500 feet altitude in the Kulu Mountains.

84238. STRANVAESIA sp. Malaceae.

No. 18165. A shrub 1 foot high, with flowers, white to pinkish; found in spruce forests of Mount Siga at 12,500 feet altitude.

84239. STRANVAESIA sp. Malaceae.

A very handsome tree, 10 to 20 feet high, with white flowers in ample corymbs. Both leaves and fruits turn crimson in the autumn. Found in the forests of Saba, eastern slopes of the Likiang Snow Range, at 11,200 feet altitude, in November, 1929.

83957 to 84251—Continued.

84240. TAXUS sp. Taxaceae. **Yew.**

No. 18502. Yunnan.

84241. TEUCRIUM sp. Menthaceae.

No. 18135. A plant with pale-yellow flowers, spotted with purple, and large yellow to purple, labiate floral bracts; found in alpine meadows on Mount Siga at 14,000 feet altitude.

84242. TSUGA YUNNANENSIS (Franch.) Masters. Pinaceae. **Yunnan hemlock.**

No. 18491. Trees from 100 to 180 feet tall, with trunks 6 to 7 feet in diameter; found on the Likiang Snow Range on the eastern and western slopes, at 11,000 feet altitude.

84243. (Undetermined.)

No. 18130. A composite with pale purple to white flowers, found in wet gravelly alpine regions on Mount Siga, at 14,500 feet altitude.

84244. (Undetermined.)

No. 18131. A composite with yellow flowers, found in alpine meadows of Mount Siga, at 14,000 feet altitude.

84245. (Undetermined.)

No. 18132. A composite with purple flowers, found in alpine meadows on Mount Siga, at 14,500 feet altitude.

84246. (Undetermined.)

No. 18183.

84247. (Undetermined.)

No. 18215.

84248. (Undetermined.)

No. 18254. A composite plant with yellow flowers; found on gravelly alpine slopes and scree at 15,000 feet altitude on Mount Mitzuga.

84249. (Undetermined.)

No. 18255. A very handsome myrsinaceous tree 25 to 30 feet high with yellow flowers, found in the Muli Mountains at 11,500 feet altitude.

84250. (Undetermined.)

No. 18343. A composite with purple flowers, found in wet gravelly alpine meadows at 14,500 feet altitude on Mount Fuchuan, northwestern Yunnan, in October, 1929.

84251. (Undetermined.)

No. 18461. An ornamental tree, 15 to 20 feet high, with white flowers in erect racemes; found among spruces and canebrake at 11,000 feet altitude in Mount Shan, north of Weihsi and east of the Mekong River, in northwestern Yunnan.

84252 to 84553.

From the Union of Socialistic Soviet Republics. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received January 8, 1930.

84252. AELUROPUS LITTORALIS (Gouan) Parl. Poaceae. **Grass.**

No. 307. From Amu-Darya District, Turkestan, September 27, 1929. A grass found on salty lands along the Amu-Darya River.

84252 to 84553—Continued.

84253. AGROPYRON CRISTATUM (L.) Gaertn. Poaceae. **Wheatgrass.**

No. 169. From Tashkent, Turkestan, September 4, 1919. An annual species found growing on dry plains.

84254 to 84258. AGROPYRON REPENS (L.) Beauv. Poaceae. **Couch grass.**

Found growing in very dry localities.

84254. No. 46. From the Alma Ata Experiment Station, northeastern Turkestan, August 20, 1929.

84255. No. 49. From the Alma Ata Experiment Station, northeastern Turkestan, August 21, 1929.

84256. No. 87. From near Issyk, northeastern Turkestan, August 22, 1929. Found along a roadside.

84257. No. 97. From Issyk, northeastern Turkestan, August 22, 1929. Found in the mountains south of the town.

84258. No. 106. From Frunze, northeastern Turkestan, August 26, 1929.

84259 to 84263. AGROPYRON spp. Poaceae. **Grass.**

84259. AGROPYRON sp.

No. 8. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 7, 1929

84260. AGROPYRON sp.

No. 9. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 7, 1929.

84261. AGROPYRON sp.

No. 38. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 16, 1929. Said to be an important constituent of native lands at higher altitudes.

84262. AGROPYRON sp.

No. 82. From Issyk, northeastern Turkestan, August 22, 1929.

84263. AGROPYRON sp.

No. 91. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84264 to 84267. AGROSTIS spp. Poaceae.

84264. AGROSTIS PALUSTRIS Huds. **Redtop.**

84265 to 84267. AGROSTRIS STOLONIFERA L. **Creeping bentgrass.**

No. 101. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84265. No. 44. From the mountains south of Alma Ata, northeastern Turkestan, August 20, 1929.

84266. No. 45. From the mountains south of Alma Ata, northeastern Turkestan, August 20, 1929.

84267. No. 177. From a single plant growing along an irrigation ditch in a Mohammedan cemetery at Vooadyl, south of Ferghana, September 6, 1929.

84268 to 84271. ALLIUM CEPA L. Liliaceae. **Onion.**

84252 to 84553—Continued.

84268. No. 161. Obtained in the old Samarkand market, September 8, 1929.

84269. No. 180. Obtained in the old Samarkand market, September 8, 1929.

84270. No. 205. Obtained in the old Shardfui market, September 16, 1929.

84271. No. 304. Obtained in the Chimbai market, September 24, 1929.

84272. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

No. 166. Obtained in the market at Vooadyl, 15 miles south of Ferghana, September 6, 1929. A very delicious freestone, white-fleshed peach of medium size.

84273. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. **Nectarine.**

No. 279. Obtained in the Chimbai market, September 23, 1929. A very red, smooth-skinned peach of delicious flavor.

84274. ANDROPOGON ISCHAEMUM L. Poaceae. **Grass.**

No. 104. From near Tokmak, August 26, 1929. Found along an irrigation ditch.

84275. ANTHYLLIS VULNERARIA L. Fabaceae. **Kidney vetch.**

A perennial herb, found throughout Europe, northern Africa, and Asia, which is grown for sheep fodder and is particularly recommended for lime soils.

For previous introduction see No. 67163.

84276. APOCYNUM VENETUM L. Apocynaceae.

No. 301. *Kendyr.* From the Chimbai Experiment Station, September 25, 1929. A fiber plant, grown quite extensively in some sections.

84277 and 84278. ARISTIDA PUNGENS Desf. Poaceae. **Grass.**

84277. No. 214. From the Agricultural Museum, Chardjui, September 16, 1929. A tall, vigorous-growing grass.

84278. No. 269. Grass from sand dunes 18 miles northeast of Chimbai on the road to Takhtakupur, September 24, 1929.

84279. BRACHYPODIUM SYLVATICUM (Huds.) Beauv. Poaceae. **Grass.**

No. 59. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84280. BROMUS MACROSTACHYS TRIARISTATUS Hack. Poaceae. **Bromegrass.**

No. 35. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 16, 1929. An annual species that furnishes good winter and spring grazing.

84281. BROMUS sp. Poaceae. **Bromegrass.**

No. 168. From south of Tashkent, Turkestan, September 4, 1929. An annual grass from the dry plains of the Golodnaya Steppes, 31 miles south of Tashkent.

84252 to 84553—Continued.

84282. CALAMAGROSTIS EPIGEJOS (L.) Roth. Poaceae. **Grass.**

No. 75. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84283. CARTHAMUS TINCTORIUS L. Asteraceae. **Safflower.**

No. 33. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 16, 1929. Used for oil and dye.

84284. CEPHALARIA sp. Dipsacaceae.

No. 57. From the mountains south of Alma Ata, August 21, 1929. A plant with very attractive globular heads of blue flowers.

84285. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

No. 163. From Ferghana District, September 5, 1929. Obtained in the old Margelau market.

84286. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

No. 297. From the village of Mangite, Khiva region, September 26, 1929. Types of millet found in one field.

84287 to 84290. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

84287. No. 194. Obtained at Samarkand, September 8, 1929. A delicious dark-green watermelon.

84288. No. 225. Obtained 93 miles north of Chardziu, September 17, 1929. A watermelon with pale-pink flesh and many seeds, not very good quality, but, because of its thick rind, it is used for preserves.

84289. No. 280. From the village of Mangite, Khiva region, September 25, 1929.

84290. No. 302. From Chimbai, September 24, 1929.

84291 to 84299. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

84291. No. 165. Obtained in the market at Vooadyl, 15 miles south of Ferghana, September 6, 1929. A delicious melon with white flesh, dark green rind, decidedly segmented, and somewhat flattened at the ends.

84292. No. 167. From near Kokand, Turkestan, September 7, 1929. A very delicious oval melon with sweet and juicy white flesh. The rough yellow rind is marked with irregular green stripes.

84293. No. 195. From the vicinity of Urgoot, 22 miles south of Samarkand, Turkestan, September 8, 1929. A yellow, oblong netted type of melon with crisp flesh which is not particularly sweet.

84294. No. 209. *Amery* melon. From the old Chardjui market, September 16, 1929. Grown for local use, but not suitable for shipping.

84295. No. 210. *Gulaby* melon. From the old Chardjui market, September 16, 1929. An autumn variety, grown for export.

84252 to 84553—Continued.

84296. No. 215. From the old Chardjui market, September 16, 1929. An uncommon variety of the globular type with dark-green skin and very delicious salmon-colored flesh.

84297. No. 218. From north of Chardjui, September 17, 1929. A melon with irregular light-green and dark-green stripes, sweet and juicy salmon-colored flesh, and a small seed cavity.

84298. No. 228. From New Urgenj, September 19, 1929. A very large, but not particularly good-flavored melon.

84299. No. 303. From Chimbai, September 24, 1929. A long dark-green, unusual type of melon, with white flesh.

84300 to 84303. CYNODON DACTYLON (L.) Pers. Poaceae. Bermuda grass.

84300. No. 24. From the Tashkent Plant Breeding Station, August 13, 1929. A much coarser and lighter-colored variety than that grown in the United States.

84301. No. 31. From the Krassny Koot Dry Land Experiment Station, Volga German Republic, August 16, 1929. A dry-land type which thrives under drier and colder conditions than are found in the United States.

84302. No. 34. From the Plant Breeding Station, Tashkent, August 15, 1929.

84303. No. 109. From the Frunze Experiment Station, northeastern Turkestan, August 27, 1929.

84304. DACTYLIS GLOMERATA L. Poaceae. Orchard grass.

No. 61. From south of Alma Ata, August 21, 1929. Found growing abundantly in the mountains; a more vigorous type than that found in the United States.

84305. ECHINOPS sp. Asteraceae. Globethistle.

No. 121. From northeastern Turkestan, August 22, 1929. A plant with beautiful blue flowers in globular heads.

84306 to 84308. FESTUCA spp. Poaceae. Grass.

84306. FESTUCA sp.

No. 84. From the mountains of Issyk, northeastern Turkestan, August 22, 1929.

84307. FESTUCA sp.

No. 94. From the mountains of Issyk, northeastern Turkestan, August 22, 1929.

84308. FESTUCA sp.

No. 105. Found along an irrigation ditch near Tokmak, northeastern Turkestan, August 26, 1929.

84309 to 84315. HORDEUM spp. Poaceae. Grass.

84309. HORDEUM BULBOSUM L.

No. 37. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 16, 1929.

84252 to 84553—Continued.

84310. HORDEUM SPONTANEUM Koch. Wild barley.

No. 32. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 16, 1929.

84311 to 84315. HORDEUM VULGARE PALLIDUM Seringe. Six-rowed barley.

84311. No. 232. Obtained in the Chavat market, between Khiva and Tashans, August 20, 1929.

84312. No. 249. From Chimbai, August 22, 1929.

84313. No. 261. From Chimbai region, August 23, 1929.

84314. No. 292. Obtained in the Gurlen market, Khiva region, August 26, 1929.

84315. No. 293. Obtained in the Gurlen market, Khiva region, August 26, 1929. Spring barley.

84316. LATHYRUS sp. Fabaceae.

No. 102. From near Djonechar, northeastern Turkestan, August 23, 1929.

84317. LIMONIUM sp. Plumbaginaceae. Sea-lavender.

No. 173. From south of Tashkent, September 4, 1929. A plant with beautiful blue flowers, found on the dry steppes of Golodnaya. It is used for tanning.

84318 to 84320. LINUM USITATISSIMUM L. Linaceae. Flax.

84318. No. 131. From the village of Uzum Agach, 25 miles northeast of Frunze, Turkestan, August 25, 1929.

84319. No. 246. From Porsu, Turkestan, August 21, 1929.

84320. No. 290. Obtained in the Gurlen market, Khiva region, August 26, 1929.

84321 to 84323. LUPINUS ANGUSTIFOLIUS L. Fabaceae. Lupine.

[Sent in from Warsaw, Poland, without notes.]

84324. LUPINUS LUTEUS L. Fabaceae. European yellow lupine.

[Sent in from Warsaw, Poland, without notes.]

84325 to 84454. MEDICAGO spp. Fabaceae. Alfalfa.

84325 to 84336. MEDICAGO FALCATA L. Yellow-flowered alfalfa.

84325. No. 10. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 7, 1929. Selection No. 1202.

84326. No. 11. From the Ukraine branch of the Botanical Institute, Volki, August 4, 1929. Wild plants.

84327. No. 14. From near Orenburg, August 10, 1929. Found along the railway track.

84328. No. 48. From the Alma Ata Experiment Station, northeastern Turkestan, August 21, 1929.

84329. No. 58. From south of Alma Ata, August 21, 1929. A single wild plant found growing along an irrigation ditch.

84252 to 84553—Continued.

84330. No. 62. From south of Alma Ata, August 21, 1929. A single wild plant growing along an irrigation ditch.

84331. No. 68. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84332. No. 74. From the mountains of Issyk, northeastern Turkestan, August 22, 1929.

84333. No. 78. From near Tolgar, August 22, 1929. A single plant.

84334. No. 98. From the mountains of Issyk, northeastern Turkestan, August 22, 1929.

84335. No. 115. From the mountains of Alma Ata, August 21, 1929.

84336. No. 204. From the railroad right of way near Orenburg, August 29, 1929.

84337 to 84451. MEDICAGO SATIVA L.

84337. No. 5. From the Sophronia Experiment Station branch of Vereley Podol, August 1, 1929.

84338. No. 13. From the Satatov Experiment Station, August 6, 1929. Acclimatized French alfalfa, introduced in 1912.

84339. No. 15. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 623.

84340. No. 16. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 228.

84341. No. 17. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 270.

84342. No. 18. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 627.

84343. No. 19. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 242.

84344. No. 20. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 628.

84345. No. 21. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 265.

84346. No. 21–B. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 265.

84347. No. 22. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 625.

84348. No. 23. From the Kharkof Experiment Station, August 2, 1929. Ukraine alfalfa No. 234.

84349. No. 25. From near Tashkent, August 15, 1929. Wild alfalfa from the Uzbekistan Experiment Station.

84350. No. 27. From near Tashkent, August 15, 1929. Wild alfalfa from the Middle Asia Plant Breeding Institute.

84351. No. 30. From near Tashkent, August 15, 1929. Wild alfalfa from the Middle Asia Plant Breeding Institute.

84252 to 84553—Continued.

84352. No. 36. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic, August 16, 1929. A wild species.

84353. No. 39. From Tashkent, August 17, 1929. Obtained in the old Tashkent market; originally grown in the Turbat district, 25 miles northeast of Tashkent.

84354. No. 40. From Tashkent, August 17, 1929. Obtained in the old Tashkent market; originally grown in Sharapkhana, near Chunbent.

84355. No. 41. From the Tashkent market, August 17, 1929. Obtained in the old Tashkent market; originally grown in the Keler district.

84356. No. 42. From the Krassny Koot Dry-Land Experiment Station, Volga German Republic. No. 3125, August 7, 1929.

84357. No. 107. From the Frunze Experiment Station, August 27, 1929. A wild alfalfa with small purple flowers and very small straight pods.

84358. No. 108. From the Frunze Experiment Station, August 27, 1929. A wild plant.

84359. No. 111. From the Frunze Experiment Station, August 27, 1929. A wild plant.

84360. No. 112. From Issyk, northeastern Turkestan, August 23, 1929. Grown locally.

84361. No. 113. From the village of Farauchi, 25 miles east of Alma Ata, August 24, 1929.

84362. No. 114. From Tolgar, northeastern Turkestan, August 22, 1929.

84363. No. 116. From near Malovodnaya, northeastern Turkestan, August 23, 1929. From a field nearly 7 years old.

84364. No. 117. From east of Alma Ata, northeastern Turkestan, August 22, 1929.

84365. No. 118. From near Malovodnaya, northeastern Turkestan, August 23, 1929.

84366. No. 119. From Malovodnaya, northeastern Turkestan, August 23, 1929.

84367. No. 120. From Turgen, 25 miles east of Alma Ata, northeastern Turkestan, August 22, 1929.

84368. No. 123. From Issyk, northeastern Turkestan, August 22, 1929. From a 20-year-old field.

84369. No. 124. From the village of Krassny Reche, 20 miles east of Frunze, on the road to Tokmak, August 27, 1929.

84370. No. 125. From the village of Georgievka, 10 miles northeast of Frunze, August 25, 1929.

84371. No. 126. From the village of Djonashar, 25 miles east of Alma Ata, August 23, 1929.

84252 to 84553—Continued.

84372. No. 127. From Tfouashar, 25 miles east of Alma Ata, August 23, 1929.

84373. No. 128. From the village of Kerkelen, between Alma Ata and Frunze, northeastern Turkestan, August 24, 1929.

84374. No. 129. From the village of Turgen, 25 miles east of Alma Ata, northeastern Turkestan, August 21, 1929.

84375. No. 130. From the village of Malovodnaya, northeastern Turkestan, August 22, 1929. From a 20-year-old field.

84376. No. 132. From the village of Georgievka, 10 miles northeast of Frunze, August 25, 1929. A wild plant.

84377. No. 133. From the village of Djartepe, Tashkent region, Turkestan, September 1, 1929. A nonshattering spring alfalfa.

84378. No. 134. From the village of Djartepe, Tashkent region, Turkestan, September 1, 1929.

84379. No. 150. From the Pacta Aral Cotton Estate, September 3, 1929. Obtained from the threshers.

84380. No. 151. From the Malik Cotton Estate, September 3, 1929. Obtained from the threshers.

84381. No. 152. From Margelan, Ferghana District, September 5, 1929. Obtained in the old market; originally from the Albi Arik region.

84382. No. 153. From Margelan, Ferghana District, September 5, 1929. Seed grown locally, obtained in the old market.

84383. No. 154. From Golodnaya, September 4, 1929.

84384. No. 155. From Margelan, Ferghana District, September 5, 1929. Obtained in the market; originally grown near Kokand.

84385. No. 156. From the village of Aovgal, 6 miles south of Ferghana, September 6, 1929. From an old alfalfa field.

84386. No. 157. From Vooadyl, 15 miles south of Ferghana. Obtained in the market; origin unknown.

84387. No. 158. From Samarkand, September 8, 1929. Obtained in the Samarkand market, but originally grown in Chalak, 25 miles south.

84388. No. 159. From Samarkand, September 8, 1929. Obtained in the market, but originally from the village of Yany-Koorgan, 31 miles southeast of Samarkand.

84389. No. 160. From Samarkand, September 8, 1929. Obtained in the old market, but originally from the village of Dovi.

84390. No. 170. From the Golodnaya Steppes, 30 miles south of Tashkent, September 4, 1929. Obtained from a few surviving plants in a 10-year-old unirrigated alfalfa field.

84252 to 84553—Continued.

84391. No. 175. From the Golodnaya Steppes, 30 miles south of Tashkent, September 4, 1929. Wild alfalfa, collected from a plant growing along an irrigation ditch.

84392. No. 179. From Vooadyl, 6 miles south of Ferghana, September 6, 1929. Found along an old irrigation ditch in a Mohammedan cemetery.

84393. No. 181. From near the village of Chalak, 22 miles north of Samarkand, September 9, 1929. From the threshers at Uzbek farm.

84394. No. 182. From Chalak, 22 miles north of Samarkand, September 9, 1929. From a field near the village.

84395. No. 183. From Chalak, 22 miles north of Samarkand, September 9, 1929. From the cooperative organization.

84396. No. 184. From southeast of Samarkand, September 10, 1929.

84397. No. 185. From near Urgoot, 22 miles southeast of Samarkand, September 10, 1929.

84398. No. 186. From near Urgoot, 22 miles southeast of Samarkand, September 10, 1929.

84399. No. 187. From the market at Urgoot, 22 miles southeast of Samarkand, September 10, 1929.

84400. No. 188. From the market at Urgoot, 22 miles southeast of Samarkand, September 10, 1929.

84401. No. 189. From the market at Urgoot, 22 miles southeast of Samarkand, September 10, 1929.

84402. No. 191. From Issbaskent, September 5, 1929. Obtained in the market, but grown at Usgen, east of Ferghana, near the Chinese boundary.

84403. No. 192. From Issbaskent, September 5, 1929. Originally from Kokand, Turkestan.

84404. No. 193. From Arapache, near Massy, northeast of Ferghana, September 9, 1929. From a farmer's field.

84405. No. 197. From near Gedjoovan, 45 miles northeast of Bokhara, September 14, 1929. From a peasant's field.

84406. No. 198. From near Gedjoovan, 45 miles northeast of Bokhara, September 14, 1929. From a peasant's field.

84407. No. 199. From Gedjoovan, September 14, 1929. Obtained in the market.

84408. No. 200. From Vodkent, 25 miles north of Bobbana, September 14, 1929. From a peasant's field.

84409. No. 201. Obtained in the market at Gedjoovan, 45 miles northeast of Bokhara, September 14, 1929.

84410. No. 202. From Vodkent, 25 miles north of Bobbana, September 14, 1929. From a peasant's field.

84252 to 84553—Continued.

84411. No. 203. From Vodkent, 25 miles north of Bobbana, September 14, 1929. From a peasant's field.

84412. No. 207. Obtained in the Chardfin market, September 16, 1929, but originally from Tash-Kufruk village.

84413. No. 208. Obtained in the old Chardjui market, September 16, 1929; grown in a near-by village.

84414. No. 220. From Denay, 25 miles north of Chardjui, September 17, 1929.

84415. No. 229. From the village of Takhta, September 20, 1929, obtained from the Tashans Cooperative Seed Growers.

84416. No. 230. Obtained in the Chavat market, between Khiva and Tashans, September 20, 1929.

84417. No. 231. From the Tashans Cooperative Seed Growers, September 20, 1929; originally grown near Porsu.

84418. No. 233. From the Tashans Cooperative Seed Growers, September 20, 1929; originally grown near Kunyatugench.

84419. No. 234. From the Poisu Cooperative Seed Growers, September 21, 1929; grown at the village of Menlibay.

84420. No. 235. From the Kunyatugench Cooperative Seed Growers, September 21, 1929; originally grown in the village of Tasazab.

84421. No. 238. From the Tashans Cooperative Seed Growers, September 21, 1929; originally grown at the village of Illgalli.

84422. No. 239. From the Kunyatugench Cooperative Seed Growers, September 21, 1929; originally grown at the village of Uzbashi.

84423. No. 242. From the Kunyatugench Cooperative Seed Growers, September 21, 1929; grown at the village of Dishki.

84424. No. 243. From the Kunyatugench Cooperative Seed Growers, September 21, 1929; grown at the village of Takedjik.

84425. No. 245. From the Tashans Cooperative Seed Growers, September 21, 1929; grown at the village of Koctoy.

84426. No. 247. From the Khodjeli Cooperative Seed Growers, September 22, 1929; grown at the village of Gaurdjab.

84427. No. 248. From the Khodjeli Cooperative Seed Growers, September 22, 1929; grown at the village of Neimandjab.

84428. No. 250. From the Khodjeli Cooperative Seed Growers, September 22, 1929; grown at the village of Djandjab.

84429. No. 251. From the Khalkabad, Chimbai region, September 23, 1929.

84430. No. 252. From Chimbai, September 23, 1929.

84252 to 84553—Continued.

84431. No. 253. From the Chimbai Seed Growers' Union, September 23, 1929; grown near Khodjeli.

84432. No. 254. From Nazarkhan, Chimbai region, September 23, 1929.

84433. No. 255. From Kezelinsky, Chimbai region, September 23, 1929.

84434. No. 256. From Aspan, Chimbai region, September 23, 1929.

84435. No. 262. From Takhtakupur County No. 9, September 24, 1929.

84436. No. 263. From Takhtakupur County No. 11, September 24, 1929.

84437. No. 264. From Takhtakupur County No. 9, September 24, 1929.

84438. No. 266. Obtained 12 miles northeast of Chimbai on the road to Takhtakupur, September 24, 1929. From a farmer's field.

84439. No. 267. Obtained 12 miles northeast of Chimbai on the road to Takhtakupur, September 24, 1929. From a farmer's field.

84440. No. 268. Obtained 12 miles northeast of Chimbai on the road to Takhtakupur, September 24, 1929.

84441. No. 270. From the Kegehusky region, near Chimbai, September 24, 1929.

84442. No. 271. From the Kegehusky region near Chimbai, September 24, 1929.

84443. No. 272. From the Khalkabad region near Chimbai, September 24, 1929.

84444. No. 273. From Takhtakupur, 25 miles northeast of Chimbai, September 24, 1929.

84445. No. 281. From Mangite, Khiva region, September 25, 1929.

84446. No. 305. From the village of Yangi-Arik, near Denau, between Chardjui and Urgeneb, September 27, 1929.

84447. No. 306. From the village of Kabahli, between Denan and Dagnata, on the road from Chardjui to Urgeneb.

84448. From Fekete Bros., Budapest, Hungary. [Received without notes.]

84449. From Basil Benzin, Prague, Czechoslovakia.

84450. From the Arnstein Seed Co., Bologna, Italy.

84451. From Warsaw, Poland.

84452 to 84454. MEDICAGO SATIVA VARIA (Mart.) Urban.

84452. No. 66. From the mountains of Alma Ata, northeastern Turkestan, August 21, 1929.

84453. No. 110. From the Frunze Experiment Station, August 27, 1929. A natural hybrid between *M. sativa* and *M. falcata*.

84454. From the Seed Laboratory, Prague, Czechoslovakia.

84252 to 84553—Continued.

84455. MELICA ALTISSIMA L. Poaceae. **Grass.**

No. 79. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84456. MELICA CILIATA L. Poaceae. **Grass.**

No. 95. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84457 to 84460. MELILOTUS spp. Fabaceae.

84457. MELILOTUS ALBA Desr. **White sweetclover.**

No. 77. From Tolgar, northeastern Turkestan, August 22, 1929. A vigorous plant found growing along the roadside.

84458. MELILOTUS ALBA Desr. **White sweetclover.**

No. 103. Near Djonechar, northeastern Turkestan, August 23, 1929. A very vigorous plant.

84459. MELILOTUS OFFICINALIS (L.) Lam. **Sweetclover.**

No. 64. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84460. MELILOTUS OFFICINALIS (L.) Lam. **Sweetclover.**

No. 76. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84461. MILIUM EFFUSUM L. Poaceae. **Millet grass.**

No. 81. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84462. MILIUM EFFUSUM L. Poaceae. **Millet grass.**

No. 92. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84463. ONOBRYCHIS ARENARIA DC. Fabaceae.

No. 4. From the Sophronia Experiment Station branch of Vesely Podol, August 1, 1929. A forage plant of much promise, which is said to make more rapid growth the first year than the ordinary sort.

84464 to 84466. ORYZA SATIVA L. Poaceae. **Rice.**

84464. No. 217. From the village of Urgench, September 19, 1929.

84465. No. 226. From the village of Pitnak, 85 kilometers south of Urgench, September 17, 1929.

84466. No. 291. From the Gurlen market, Khiva region, September 26, 1929. Seed grown locally.

84467 to 84471. PANICUM MILIACEUM L. Poaceae. **Proso.**

84467. No. 219. From the village of Kurnya Urgench, September 19, 1929.

84468. No. 237. From Kurnya Urgench, September 21, 1929.

84469. No. 259. From the Chimbai region, September 23, 1929.

84252 to 84553—Continued.

84470. No. 260. From the Chimbai region, September 23, 1929.

84471. No. 297. Found in one field near the village of Mangite, Khiva region, September 26, 1929.

84472. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 294. Khiva region, September 24, 1929.

84473 to 84475. PHLEUM PANICULATUM Huds. Poaceae. **Timothy.**

84473. No. 51. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84474. No. 85. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84475. No. 171. From the dry plains of the Golodnaya Steppes, 30 miles south of Tashkent, September 14, 1929.

84476. PHLEUM PHLEOIDES (L.) Karst. Poaceae. **Timothy.**

No. 93. A single plant found in the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84477 to 84480. POA spp. Poaceae. **Bluegrass.**

84477. POA BULBOSA L. **Bluegrass.**

No. 29. From the Krassny Koot Dry-Land Experiment Station, near Tashkent, Volga German Republic, August 16, 1929.

84478. POA PRATENSIS L. **Kentucky bluegrass.**

No. 12. From near Saratov, Russia, August 6, 1929. Found growing wild along the roadway.

84479. POA PRATENSIS L. **Kentucky bluegrass.**

No. 98. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84480. POA sp.

No. 55. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84481. PRUNUS sp. Amygdalaceae. **Plum.**

From the village of Turrenne, near Brire, France.

84482. SALVIA sp. Menthaceae. **Sage.**

No. 63. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929. A wild plant with interesting blue flowers.

84483. SAUSSUREA sp. Asteraceae.

No. 172. From the Golodnaya Steppes, 31 miles south of Tashkent, September 4, 1929. A species with blue flowers.

84484. SECALE CEREALE L. Poaceae. **Rye.**

No. 56. From Alma Ata, northeastern Turkestan, August 21, 1929.

84485. SECALE CEREALE L. Poaceae. **Rye.**

No. 90. From near Frunze, northeastern Turkestan, August 22, 1929. From a peasant's field.

84252 to 84553—Continued.

84486 to 84510. SORGHUM VULGARE Pers. **Sorghum.**

84486. From the Chimbai market, August 22, 1929. White durra (no head sample); very flat seed.

84487. From Samarkand, Turkestan, September 10, 1929. Crookneck white durra with large compact head.

84488. No. 162. From Margelan, near Ferghana, September 5, 1929.

84489. No. 190. From near Vooadyl, 15 miles south of Ferghana, September 5, 1929. Gooseneck type.

84490. No. 196. From near Ferghana, Turkestan, September 6, 1929.

84491. No. 206. From the old Chardjui market, September 16, 1929. Native name *Alty Ilik*, meaning 6-months' maturity. A dwarf white durra. (No head sample.)

84492. No. 211. From the old Chardjui market, September 16, 1929. Local name *Uch-Ilik*, meaning three months. White durra.

84493. No. 213. From the vicinity of Chardjui, September 16, 1929. Brown durra seeds, large, red brown, flat.

84494. No. 216. From the village of Darganata, 25 miles south of Kurnya Urgench, September 18, 1929. White durra, mid-compact small head.

84495. No. 221. From the village of Pitnak, 53 miles south of Kurnya Urgench, September 18, 1929. Gooseneck white durra; seeds mid-size.

84496. No. 227. From the village of Kraznarasp, 45 miles south of Kurnya Urgench, September 18, 1929. Gooseneck white durra with large plump seeds.

84497. No. 240. From the village of Kurnya Urgench, September 21, 1929. Crookneck white durra, a small compact head.

84498. No. 241. From the village of Kurnya Urgench, September 21, 1929. Crookneck brown durra with medium-sized, compact head.

84499. No. 274. Type grown as feed for stock in the Khiva district, especially Tashans; September 24, 1929.

84500. No. 275. From the Chimbai region, September 24, 1929. White durra (probably erect heads) with mid-compact small heads.

84501. No. 276. From the Khiva Experiment Station, September 20, 1929. Red milo, rather small seeds.

84502. No. 277. From the Khiva Experiment Station, September 20, 1929. Black-glumed sorghum with angular white seeds.

84503. No. 278. From the village of Chavat, Khiva region, September 20, 1929. Broomcorn.

84504. No. 282. From the village of Mangite, Khiva region, September 25, 1929. A variety with black glumes and angular seeds.

84252 to 84553—Continued.

84505. No. 285. From the village of Mangite, Khiva region, September 25, 1929. A variety with reddish brown glumes.

84506. No. 286. From the Gurlen market, September 26, 1929. White durra with large plump seeds like milo.

84507. No. 298. From Urgench, September 27, 1929. Variety Kalty-Bash. A dwarf white durra with rather plump seeds.

84508. No. 299. From Urgench, September 27, 1929. Variety Elly. A white durra with large plump seeds. Medium size.

84509. No. 300. From Urgench, September 27, 1929. Variety Katty Bash. A tall white durra with large plump seeds.

84510. No. 310. From the Charabudinshu Experiment Station, near old Bokhara. Dwarf broomcorn with dark red-brown glumes which differ in glume color from the type grown in the United States.

84511. STIPA CAPILLATA L. Poaceae. **Feathergrass.**

No. 100. From near Tolgar, northeastern Turkestan, August 22, 1929. Found along the roadside.

84512. TAMARIX sp. Tamaricaceae.

No. 308. September 27, 1929. A tamarix with very beautiful purple flowers; found on salty lands along the Amu-Darya.

84513 to 84522. TRIFOLIUM spp. Fabaceae. **Clover.**

84513. TRIFOLIUM FRAGIFERUM L. **Strawberry clover.**

No. 53. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929. Found in abundance along irrigation ditches.

84514 to 84517. TRIFOLIUM PRATENSE L. **Red clover.**

84514. No. 28. From the Uzbekistan Experiment Station, near Tashkent, August 16, 1929. A wild red clover.

84515. No. 83. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929. A wild red clover.

84516. From Prague, Czechoslovakia.

84517. From Prague, Czechoslovakia.

84518 to 84521. TRIFOLIUM REPENS L. **White clover.**

84518. No. 67. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84519. No. 71. From the mountains south of Issyk, August 22, 1929. Found on very dry land.

84520. No. 80. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84521. No. 88. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929.

84522. TRIFOLIUM FRAGIFERUM L. **Strawberry clover.**

84252 to 84553—Continued.

No. 26. From the Uzbekistan Experiment Station near Tashkent, August 16, 1929.

84523 to 84538. TRITICUM spp. Poaceae. **Wheat.**

84523 to 84536. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

84523. No. 52. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84524. No. 72. From near Issyk, northeastern Turkestan, August 22, 1929. From a peasant's field.

84525. No. 73. From near Issyk, northeastern Turkestan, August 22, 1929. From a peasant's field.

84526. No. 133–A. From the village of Djartepe, Tashkent region, Turkestan, September 1, 1929. A nonshattering spring wheat.

84527. No. 176. South of Ferghana, Turkestan, September 6, 1929. Sample taken from the hopper of an old mill.

84528. No. 212. From the old Chardjin market, Chardjin region, Turkestan, September 16, 1929. Winter wheat.

84529. No. 224. From the village of Dnay, north of Chardjin, September 17, 1929. Winter wheat.

84530. No. 236. From Porsu, Khiva region, Turkestan, September 21, 1929. Winter wheat.

84531. No. 257. From the Chimbai region, September 23, 1929. Winter wheat.

84532. No. 258. From the Chimbai region, September 23, 1929. Winter wheat.

84533. No. 284. From the village of Mangite, Khiva region, September 26, 1929.

84534. No. 287. From the village of Mangite, Khiva region, September 26, 1929. Winter wheat.

84535. No. 288. From the Gurlen market, Khiva region, September 26, 1929. Winter wheat.

84536. No. 289. From the village of Mangite, Khiva region, September 26, 1929.

84537 and 84538. TRITICUM DURUM Desf. **Durum wheat.**

From the Krassny Koot Dry Land Experiment Station, Volga German Republic, August 7, 1929. Selections of spring wheat.

84537. No. 6.

84538. No. 7.

84539 to 84549. VICIA spp. Fabaceae. **Vetch.**

84539 and 84540. VICIA SATIVA L. **Common vetch.**

From Warsaw. [Received without notes.]

84541 and 84542. VICIA VILLOSA Roth. **Hairy vetch.**

84252 to 84553—Continued.

From Warsaw. [Received without notes.]

84543. VICIA sp.

No. 43. From Frunze, Turkestan, August 20, 1929.

84544. VICIA sp.

No. 50. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929.

84545. VICIA sp.

No. 54. From the mountains south of Alma Ata, northeastern Turkestan, August 21, 1929. Found abundantly.

84546. VICIA sp.

No. 69. From the mountains of Alma Ata, northeastern Turkestan, August 21, 1929.

84547. VICIA sp.

No. 70. From near Abael station, August 19, 1929. Found along the railroad.

84548. VICIA sp.

No. 86. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929. Rare.

84549. VICIA sp.

No. 99. From the mountains south of Issyk, northeastern Turkestan, August 22, 1929. Abundant.

84550. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 283. From the village of Mangite, Khiva region, September 25, 1929.

84551 to 84553. ZEA MAYS L. Poaceae. **Corn.**

84551. No. 164. From the Golodnaya Steppes, 31 miles south of Tashkent, September 4, 1929.

84552 and 84553. From the village of Mangite, Khiva region, September 26, 1929. Seldom seen, and grown only for the amusement of children.

84552. No. 295.

84553. No. 296.

84554. ABIES FORRESTII Craib. Pinaceae. **Fir.**

From southwestern China. Seeds collected by Dr. J. F. Rock, National Geographic Society, Washington, D. C. Received January 10, 1930.

From the Likiang Snow Range, Yunnan, November, 1929. A handsome tree, 70 to 80 feet in height, with a trunk 2 feet or more in diameter, common on moist mountain meadows and steep limestone slopes at altitudes between 10,000 and 13,500 feet. The needles are white beneath, and the cones are purplish blue to black.

For previous introduction see No. 58641.

84555. CALLITRIS CUPRESSIFORMIS Vent. (*C. rhomboidea* R. Br.). Pinaceae.

From Hobart, Tasmania. Seeds presented by L. A. Evans, Department of Agriculture. Received January 10, 1930.

An Australian evergreen tree reaching a height of 50 feet, with slender drooping branches and globular cones.

For previous introduction see No. 76922.

84556. ABIES sp. Pinaceae. **Fir.**

From southwestern China. Seeds collected by Dr. J. F. Rock, National Geographic Society, Washington, D. C. Received January 10, 1930.

No. 18488. From the eastern slopes of the Likiang Snow Range, November, 1929. A tree 50 to 80 feet high with pale-brown bark, long pale-green leaves, white beneath, and yellowish brown cones about 6 inches long. Found between 9,500 and 10,500 feet altitude in company with pines. The wood is said to be valuable.

84557. CANNA sp. Cannaceae.

From Brazil. Seeds collected by Mrs. Agnes Chase, United States Department of Agriculture. Received January 7, 1930.

Araruama, Rio de Janeiro, December 11, 1929. A canna with bright yellow flowers, found on moist sandy ground.

84558. LEUCAENA TRICHODES (Jacq.) Benth. Mimosaceae.

From Tahara, Piura, Peru. Seeds presented by Oscar Haught. Received January 9, 1930.

An evergreen shrub with bipinnate leaves having two to three pairs of pinnae and three to five pairs of ovate leaflets. The small whitish flowers are in dense heads which are borne in pairs on axillary peduncles. Native to Peru.

84559. COFFEA ARABICA L. Rubiaceae. **Arabian coffee.**

From Trinidad, British West Indies. Seeds presented by R. O. Williams, Superintendent and Assistant Botanist, Botanic Garden, Department of Agriculture. Received January 24, 1930.

San Ramon.

84560 to 84562. CITRUS spp. Rutaceae.

From Acireale, Sicily. Seeds presented by Dr. H. S. Fawcett, University of California. Received January 9, 1930.

84560. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. **Mandarin orange.**

No. 22. From Villa Maltese, Portici, Italy, December 9, 1929. A mandarin, superior in size and color.

84561. CITRUS sp.

No. 39.

84562. CITRUS sp.

No. 21. From the Agricultural School, Portici, Italy, December 9, 1929. A large flat-fruited, sour orange.

84563. CITRUS MIARAY Wester. Rutaceae. **Miaray.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received January 6, 1930.

A handsome ornamental tree suggested as a stock for cultivated citrus fruits. It has slender drooping willowy branches, dark-green leaves, and fruits resembling the lime in appearance and flavor. Native to the Philippine Islands.

For previous introduction see No. 81995.

84564. CITRUS sp. Rutaceae.

From Valencia, Spain. Seeds presented by B. Planelles Granell, through H. J. Quayle, at the request of Dr. H. S. Fawcett, University of California. Received January 4, 1930.

No. 32. From near Seville. Sour orange.

84565. CITRUS sp. Rutaceae.

From Holguin, Cuba. Seeds presented by Thomas R. Towns. Received January 9, 1930.

Shaddock. A variety used as stock for the navel orange, but not considered as good for grapefruit.

84566 to 84568. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From Aguascalientes, Mexico. Seeds presented by Mrs. Julia C. de Diaz. Received January 24, 1930.

84566. *China limpia.*

84567. *Media China.* (Light.)

84568. *Media China.* (Dark.)

84569 to 85023.

From Chosen and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 20, 1930.

84569. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

No. 3118. From Kiho, Chosen, December 7, 1929. Secured from a grain dealer.

84570. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

No. 3230. *Zairaito.* From Keijo, Chosen, December 12, 1929. From the Keikido-Nando Seed and Nursery Farm. Original green barley.

84571 to 84577. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

84571. No. 3430. *Manchuria select.* Shimonosiki, Japan, December 8, 1929. Small brownish red beans, used for sprouts and also for confections.

84572 to 84577. From the Saitama Agricultural Experiment Station, Urawa, December 12, 1929. Varieties which should be tried for sprouting.

84572. No. 3489. *Maruba asuk.* Small glossy red beans with a prominent white hilum; used for making various confections.

84573. No. 3490. *Usuaka asuki.* Small pinkish buff colored beans used for making confections.

84574. No. 3491. *Akahihaku azuki.* Medium-small red and white beans; used for confections.

84575. No. 3492. *Chunagon azuki.* A small glossy red bean with a prominent white hilum; used for making confections.

84576. No. 3493. *Kintok azuki.* A medium small glossy red bean; used for making confections.

84577. No. 3494. *Kensaki.* A medium small glossy red bean with prominent white hilum; used for making confections.

84569 to 85023—Continued.

84578 to 85023. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

84578 to 84904. Collected at the Suigen Agricultural Experiment Station, December 2, 1929.

84578. No. 2132. Station No. S–1. Medium-sized oval black bean with green hilum.

84579. No. 2133. Station No. S–2. Medium-sized, oval, black; similar to the Ebony variety (No. 17254).

84580. No. 2134. Station No. S–3. Medium-sized, oval, cloudy green bean with black hilum.

84581. No. 2135. Station No. S–4. Medium-sized, oval, cloudy green bean, with brown hilum.

84582. No. 2136. Station No. S–5. Medium-small, oval, slightly flattened green bean heavily mottled with brown, which has a brown hilum.

84583. No. 2137. Station No. S–6. A medium-large long oval green bean, heavily mottled with brown, which has a brown hilum.

84584. No. 2138. Station No. S–7. A medium-small, nearly round, glossy green bean, slightly mottled with brown, which has a dark-brown hilum.

84585. No. 2139. Station No. S–8. A medium-sized, nearly round, glossy yellow bean with a light-brown hilum.

84586. No. 2140. Station No. S–9. A medium-small, nearly round green bean, slightly mottled with brown, and which has a brown hilum.

84587. No. 2141. Station No. S–10. A medium-small oval green bean, slightly mottled with brown and having a brown hilum.

84588. No. 2142. Station No. S–11. A medium-sized oblong green bean with a long and rather wide dark-brown hilum.

84589. No. 2143. Station No. S–12. A medium-sized, oval, slightly flattened green bean with a light olive green saddle and a brown hilum.

84590. No. 2144. Station No. S–13. A medium-sized oval green bean with a brown hilum.

84591. No. 2145. Station No. S–14. A medium-large oval green bean, slightly mottled with brown and having a brown hilum.

84592. No. 2146. Station No. S–15. A medium-small, much flattened, glossy black bean, very similar to the Peking variety (No. 17852–B).

84593. No. 2147. Station No. S–16. A medium-small, slightly flattened oval black bean.

84594. No. 2148. Station No. S–17. A medium-oblong, slightly flattened back bean, very similar to the Jet variety (No. 17861).

84569 to 85023—Continued.

84595. No. 2149. Station No. S–18. A medium-small, oval, dark cloudy brown bean with the testa split on nearly all the seeds.

84596. No. 2150. Station No. S–19. A medium-large, oval, slightly flattened black bean.

84597. No. 2151. Station No. S–20. A medium-small oval black bean, very similar to the Ebony variety (No. 17254).

84598. No. 2152. Station No. S–21. A medium-sized, oblong, slightly flattened black bean.

84599. No. 2153. Station No. S–22. Medium-sized, oblong, much flattened black beans, most of which have a slight depression or dent peculiar to this variety.

84600. No. 2154. Station No. S–23. A very small round black bean with a yellow hilum. It should be of value for sprouts.

84601. No. 2155. Station No. S–24. A small oval black bean with a yellow hilum.

84602. No. 2156. Station No. S–25. A medium-small oblong black bean with a yellow hilum.

84603. No. 2157. Station No. S–26. A small, oval, much-flattened black bean.

84604. No. 2158. Station No. S–27. A medium-small, oblong, much-flattened black bean.

84605. No. 2159. Station No. S–28. A very small, oval, much-flattened black bean.

84606. No. 2160. Station No. S–29. A very small round black bean with a yellow hilum.

84607. No. 2161. Station No. S–30. A very small, oblong, much-flattened black bean with a yellow hilum.

84608. No. 2162. Station No. S–31. A large oval green bean, mottled with brown, with a brown hilum.

84609. No. 2163. Station No. S–32. A medium-small, oblong, much-flattened black bean with brown about the hilum.

84610. No. 2164. Station No. S–33. A small, oval, much-flattened black bean with a brownish hilum.

84611. No. 2165. Station No. S–34. A medium-small, oblong, much-flattened black bean.

84612. No. 2166. Station No. S–35. A medium-small, very much flattened black bean, very similar to the Laredo variety (No. 40658).

84613. No. 2167. Station No. S–36. A medium-sized, oval, slightly flattened black bean.

84614. No. 2168. Station No. S–38. A large wrinkled greenish yellow bean, with many purple spots and a slate-black hilum.

84615. No. 2169. Station No. S–39. A medium-small oval black bean very similar to the variety Ebony (No. 17254).

84569 to 85023—Continued.

84616. No. 2170. Station No. S–40. A medium-sized oval reddish brown bean with a brown hilum.

84617. No. 2171. Station No. S–41. A medium-small, nearly round, coffee-brown bean, very similar to the variety Baird (No. 22333).

84618. No. 2172. Station No. S–42. A medium-large oval greenish yellow bean, heavily mottled with black and with a black hilum.

84619. No. 2173. Station No. S–43. A large oval bluish green bean, heavily mottled with dark brown and purple spots and with a slate-black hilum.

84620. No. 2174. Station No. S–44. A medium-sized, oval, slightly flattened black bean with a yellow hilum.

84621. No. 2175. Station No. S–46. A medium-sized oval greenish yellow bean slightly mottled with brown, with large dark-brown hilum.

84622. No. 2176. Station No. S–47. A medium-sized oval glossy yellowish green bean, heavily mottled with brown and with a rather large dark-brown hilum.

84623. No. 2177. Station No. S–48. A medium-small oval black bean with a yellow hilum.

84624. No. 2178. Station No. S–49. A medium-large, oblong, slightly flattened, greenish yellow bean, heavily mottled with brown and with a dark-brown hilum.

84625. No. 2179. Station No. S–50. A medium-large, oval, slightly flattened black bean with a yellow hilum.

84626. No. 2180. Station No. S–51. A medium-large oval glossy greenish yellow bean, heavily mottled with brown; hilum brown.

84627. No. 2181. Station No. S–52. A medium-large, oval, slightly flattened, greenish yellow bean with a large brown hilum.

84628. No. 2182. Station No. S–53. A medium-small oval glossy yellow bean with a russet hilum.

84629. No. 2183. Station No. S–54. A medium-sized oval glossy greenish yellow bean, heavily mottled with brown, with a pale hilum.

84630. No. 2184. Station No. S–55. A medium-sized oval greenish yellow bean, heavily mottled with brown, with a pale hilum. Very similar to the Shingto variety (No. 21079).

84631. No. 2185. Station No. S–56. A medium-sized oval greenish yellow bean, heavily mottled with dark brown, with a pale hilum.

84632. No. 2186. Station No. S–57. A medium-sized oval glossy greenish yellow bean with a pale hilum.

84633. No. 2187. Station No. S–58. A medium-sized oval dark-brown bean.

84634. No. 2188. Station No. S–59. A medium-sized oval yellow bean, very heavily mottled with black; black hilum.

84635. No. 2189. Station No. S–60. A medium-sized oval pale-yellow bean, heavily mottled with dark brown.

84636. No. 2190. Station No. S–61. A medium-sized oval glossy yellow bean, slightly mottled with brown, with a brown hilum.

84637. No. 2191. Station No. S–62. A medium-small to medium-large yellow bean, more or less flattened, heavily mottled with brown, with a brown hilum.

84638. No. 2192. Station No. (?) A medium-sized oval yellow bean with a dark-brown hilum.

84639. No. 2193. Station No. S–64. A medium-small, long oval, much-flattened, light yellow bean, heavily mottled with black, with a black hilum.

84640. No. 2194. Station No. S–65. A medium-small oval yellow bean, very heavily mottled with dark brown, with a dark-brown hilum.

84641. No. 2195. Station No. S–66. A medium-large oval light-yellow bean, slightly mottled with brown, with a brown hilum.

84642. No. 2196. Station No. S–67. A medium-small, nearly round yellow bean, heavily mottled with brown, with a brown hilum.

84643. No. 2197. Station No. S–68. A medium-sized, oval, very pale yellow bean with a light russet-brown hilum.

84644. No. 2198. Station No. S–69. A medium-sized, oval, slightly flattened yellow bean, slightly mottled with brown, with a dark-brown hilum.

84645. No. 2199. Station No. S–70. A medium-small, nearly round, glossy yellow bean, slightly mottled with brown, with a dark-brown hilum.

84646. No. 2200. Station No. S–71. A medium-sized oval pale-yellow bean, heavily mottled with brown, with a dark-brown hilum.

84647. No. 2201. Station No. S–72. A medium-sized oval yellow bean with a light-brown hilum.

84648. No. 2202. Station No. S–73. A medium-large oval light-yellow bean with a long, large dark-brown hilum.

84649. No. 2203. Station No. S–74. A very small round yellow bean, more or less mottled with brown, with a dark-brown hilum.

84650. No. 2204. Station No. S–75. A very small oval, glossy yellow bean, very heavily mottled with brown, with a dark-brown hilum. This variety should make an excellent sort for sprouting.

84651. No. 2205. Station No. S–76. A medium-sized round glossy yellow bean with a dark-brown hilum.

84569 to 85023—Continued.

84652. No. 2206. Station No. S–77. A medium-sized oval pale-yellow bean with a russet-brown hilum.

84653. No. 2207. Station No. S–78. A medium-sized long oval pale-yellow bean with a brown hilum.

84654. No. 2208. Station No. S–79. A medium-sized oval glossy yellow bean with a russet-brown hilum.

84655. No. 2209. Station No. S–80. A medium-sized oval pale-yellow bean, heavily mottled with brown, with a pale hilum.

84656. No. 2210. Station No. S–81. A medium-small long oval yellow bean, heavily mottled with brown, with a light-brown hilum.

84657. No. 2211. Station No. S–83. A medium-sized long oval pale glossy yellow bean with a russet-brown hilum.

84658. No. 2212. Station No. S–85. A medium-small oval glossy yellow bean, slightly mottled with brown, with a brown hilum.

84659. No. 2213. Station No. S–86. A medium-sized oval pale-yellow bean, slightly mottled with brown, with a russet-brown hilum.

84660. No. 2214. Station No. S–87. A medium-sized long oval glossy yellow bean with a russet-brown hilum.

84661. No. 2215. Station No. S–88. A medium-sized oval glossy yellow bean, mottled with brown, with a pale-brown hilum.

84662. No. 2216. Station No. S–90. A medium-sized long oval pale-yellow bean, heavily mottled with brown, with a light-brown hilum.

84663. No. 2217. Station No. S–91. A medium-sized oval glossy yellow bean with a pale hilum.

84664. No. 2218. Station No. S–92. A medium-sized oval glossy yellow bean with a pale hilum.

84665. No. 2219. Station No. S–93. A medium-large oval light-yellow bean, heavily mottled with brown, with a brown hilum.

84666. No. 2220. Station No. S–94. A medium-sized, oval, slightly flattened yellow bean, heavily mottled with brown, with a pale-brown hilum.

84667. No. 2221. Station No. S–95. A medium-sized oval glossy yellow bean with a pale hilum.

84668. No. 2222. Station No. S–96. A medium-sized oval wrinkled pale-yellow bean, heavily mottled with brown, with a pale-brown hilum.

84669. No. 2223. Station No. S–97. A medium-sized oval yellow bean with a pale to light russet-brown hilum.

84670. No. 2224. Station No. S–98. A medium-sized oval yellow bean with a light-brown hilum.

84671. No. 2225. Station No. S–99. A medium-sized oval glossy yellow bean heavily mottled with black, with a black hilum.

84569 to 85023—Continued.

84672. No. 2226. Station No. S–100. A medium-small, nearly round to oval black bean with a yellow hilum. Very similar to Ebony or Black Beauty (No. 17254).

84673. No. 2227. Station No. E–1. A medium-sized oval black bean with a green hilum.

84674. No. 2228. Station No. E–2. A medium-sized, oval, slightly flattened, black bean with a green hilum.

84675. No. 2229. Station No. E–4. A medium-sized, oval, slightly flattened black bean with a yellow hilum.

84676. No. 2230. Station No. E–7. A medium-large, nearly round, glossy yellow bean, heavily mottled with black, with a black hilum.

84677. No. 2231. Station No. E–8. A medium-large, oval, wrinkled, cloudy yellow bean with a pale hilum.

84678. No. 2232. Station No. E–9. A medium-large oval wrinkled yellow bean with a pale hilum.

84679. No. 2233. Station No. E–10. A medium-large, oval, somewhat cloudy pale-yellow bean with a pale hilum.

84680. No. 2234. Station No. E–12. A medium-sized, nearly round, yellow bean with black and brown saddle and a black hilum.

84681. No. 2235. Station No. E–13. A medium-sized oval yellow bean with a black hilum.

84682. No. 2236. Station No. E–14. A medium-sized oval glossy yellow bean with a slate-black hilum.

84683. No. 2237. Station No. E–15. A medium-sized oval glossy yellow bean with a brown hilum.

84684. No. 2238. Station No. E–16. A medium-large oval grayish yellow bean with a pale hilum; seed coat more or less wrinkled, and there are prominent brown spots at the end of the hilum.

84685. No. 2239. Station No. E–17. A medium-sized oval glossy cloudy yellow bean with a brown hilum.

84686. No. 2240. Station No. E–19. A medium-sized oval light-yellow bean with a dark-brown hilum. The seed coat is more or less wrinkled.

84687. No. 2241. Station No. E–20. A medium-sized long oval glossy yellow bean with a hilum which varies from light to dark brown.

84688. No. 2242. Station No. E–21. A medium-sized oval pale-yellow bean with many purple spots and with a slate-black hilum.

84689. No. 2243. Station No. E–22. A medium-sized oval yellow bean with a long black hilum.

84690. No. 2244. Station No. E–23. A medium-sized round yellow bean, mottled with brown, with a brown hilum.

84569 to 85023—Continued.

84691. No. 2245. Station No. E–25. A medium-sized, nearly round, pale-yellow bean, more or less mottled with brown, with a brown hilum.

84692. No. 2246. Station No. E–26. A medium-sized round yellow bean, heavily mottled with brown, and with a light brown hilum.

84693. No. 2247. Station No. LG–1. A large oval greenish yellow bean, mottled with black, with a black hilum.

84694. No. 2248. Station No. LG–2. A large, oval, slightly flattened, greenish yellow bean with a black hilum.

84695. No. 2249. Station No. LG–3. A medium-large oval greenish yellow bean, mottled with black, with a black hilum.

84696. No. 2250. Station No. LG–4. A medium-sized oval greenish yellow bean with a black hilum. Mottled with black and the seed testa more or less split.

84697. No. 2251. Station No. LG–5. A medium-large, oval, glossy, light greenish yellow bean with a pale slate-black hilum.

84698. No. 2252. Station No. LG–6. A medium-large long oval greenish yellow bean, mottled with brown, with a thin, dry, wrinkled seed coat and a brown hilum.

84699. No. 2253. Station No. LG–7. A medium-sized oval greenish yellow bean with a slate-black hilum.

84700. No. 2254. Station No. LG–8. A medium-large, oval, glossy, greenish yellow bean with a slate-black hilum.

84701. No. 2255. Station No. LG–9. A medium-small oval black and yellow bean.

84702. No. 2256. Station No. LG–10. A medium-small, oval, glossy, greenish yellow bean, much mottled with brown, with a brown hilum.

84703. No. 2257. Station No. LG–11. A medium-large oval greenish yellow bean with a black hilum. The testa is more or less split.

84704. No. 2258. Station No. LG–12. A medium-sized, oval, slightly flattened, light-green bean with a yellow germ and a large elongated dark-brown hilum.

84705. No. 2259. Station No. LG–13. A medium-sized, oval, glossy, greenish yellow bean, slightly mottled with brown, with a brown hilum.

84706. No. 2260. Station No. LG–14. A medium-small, oval, glossy, greenish yellow bean, slightly mottled with brown, with a brown hilum.

84707. No. 2261. Station No. LG–15. A medium-sized, oval, cloudy, greenish yellow bean with a brown hilum.

84708. No. 2262. Station No. LG–16. A medium-small oblong greenish yellow bean with a brown hilum.

84569 to 85023—Continued.

84709. No. 2263. Station No. LG–17. A medium-small, oblong, slightly flattened greenish yellow bean, mottled with brown, with a brown hilum.

84710. No. 2264. Station No. LG–18. A medium-sized, oval, light, cloudy greenish yellow bean with a brown hilum.

84711. No. 2265. Station No. LG–19. A medium-sized, oval, light, greenish yellow bean, slight brown mottling, with a light-brown hilum.

84712. No. 2266. Station No. LG–20. A medium-small, oval, glossy, greenish yellow bean with a dark-brown hilum.

84713. No. 2267. Station No. LG–21. A medium-sized, oval, cloudy-brown greenish yellow bean with a brown hilum.

84714. No. 2268. Station No. LG–22. A medium-sized, oval, dark cloudy greenish yellow bean with a brown hilum.

84715. No. 2269. Station No. LG–23. A medium-sized, oval, slightly cloudy greenish yellow bean, slightly mottled with brown, with a light-brown hilum.

84716. No. 2270. Station No. LG–24. A medium-sized oval greenish yellow bean, slightly clouded with brown, with a brown hilum.

84717. No. 2271. Station No. LG–25. A medium-small oval greenish yellow bean, mottled with brown, with a brown hilum.

84718. No. 2272. Station No. LG–26. A medium-small oval greenish yellow bean with a brown hilum. Similar to Lexington variety (No. 17862–E).

84719. No. 2273. Station No. LG–27. A medium-small oval greenish yellow bean with a brown hilum.

84720. No. 2274. Station No. LG–28. A medium small oval greenish yellow bean with a brown hilum. Very similar to the Lexington variety (No. 17862–E).

84721. No. 2275. Station No. LG–29. A medium-large, nearly round, glossy, bright greenish yellow bean, slightly mottled with brown.

84722. No. 2276. Station No. LG–30. A medium-small, nearly round, pale greenish yellow bean, slightly mottled with brown, with a dark brown hilum.

84723. No. 2277. Station No. LG–31. A medium-sized, oval, yellow to pale greenish yellow bean, slightly mottled with brown, with a brown hilum.

84724. No. 2278. Station No. LG–32. A medium-sized oval greenish yellow bean, slightly mottled with brown, with a dark-brown hilum.

84725. No. 2279. Station No. LG–34. A medium-small oval greenish yellow bean, mottled with brown, with a russet-brown hilum.

84726. No. 2280. Station No. LG–33. A medium-small oval greenish yellow bean, much mottled with brown, with a brown hilum.

84569 to 85023—Continued.

84727. No. 2281. Station No. LG–35. A medium-small oval greenish yellow bean, mottled with brown, with a russet-brown hilum.

84728. No. 2282. Station No. LG–36. A large oval greenish yellow bean, mottled with dark brown, with a dark-brown hilum.

84729. No. 2283. Station No. LG–37. A medium-large oval greenish yellow bean, heavily mottled with dark brown, with a light-brown hilum.

84730. No. 2284. Station No. LG–38. A medium-large, nearly round, greenish yellow bean, mottled black and brown and with a pale-brown hilum occasionally marked with black.

84731. No. 2285. Station No. LG–39. A medium-large oval slightly flattened, greenish yellow bean with a light-brown hilum; slightly mottled with brown, and the testa is slightly cracked.

84732. No. 2286. Station No. LG–40. A medium-large oval yellowish green bean, mottled slightly with brown, with a pale hilum.

84733. No. 2287. Station No. LG–41. A medium-sized oval yellowish green bean, slightly clouded with brown, with a light-brown hilum.

84734. No. 2288. Station No. LG–42. A medium-large oval yellowish green bean, slightly clouded with brown, with a light russet-brown hilum.

84735. No. 2289. Station No. LG–43. A medium-large oval light cloudy brown, greenish yellow bean with a pale hilum.

84736. No. 2290. Station No. LG–44. A medium-sized oval greenish yellow bean, slightly clouded with brown, with a very light brown hilum.

84737. No. 2291. Station No. LG–45. A medium-large oval yellowish green bean, slightly clouded with brown, with a very light brown hilum.

84738. No. 2292. Station No. LG–46. A medium-large oval light yellowish green bean, with a light-brown hilum; testa split in some beans.

84739. No. 2293. Station No. LG–47. A large oval glossy yellowish green bean with a pale hilum.

84740. No. 2294. Station No. LG–48. A medium-large oval yellowish green bean with a pale-brown hilum. The seed coat is split in most cases and slightly clouded with brown.

84741. No. 2295. Station No. LG–49. A medium-large oval greenish yellow bean, slightly mottled with brown, with a pale-brown hilum.

84742. No. 2296. Station No. LG–50. A medium-sized oval yellowish green bean, heavily mottled with brown and with a light-brown hilum.

84743. No. 2297. Station No. LG–51. A medium-large glossy yellow bean with a pale hilum.

84569 to 85023—Continued.

84744. No. 2298. Station No. LG–52. A medium-large oval yellowish green bean, slightly clouded with brown, with a pale-brown hilum.

84745. No. 2299. Station No. LG–53. A large oval yellowish green bean, slightly clouded with brown, and with a brown hilum.

84746. No. 2300. Station No. LG–54. A medium-sized oval glossy yellowish green bean, heavily mottled with dark brown, with a pale hilum.

84747. No. 2301. Station No. LG–55. A medium-sized oval yellowish green bean, heavily mottled with dark brown, with a pale-brown hilum.

84748. No. 2302. Station No. LG–56. A medium-sized oval yellowish green bean, heavily mottled with dark brown, with a pale hilum.

84749. No. 2303. Station No. LG–57. A medium-sized long oval yellowish green bean, slightly clouded with brown, with a light-brown hilum.

84750. No. 2304. Station No. LG–58. A medium-sized oval slightly flattened, yellowish green bean, more or less clouded with brown. Hilum is light brown.

84751. No. 2305. Station No. LG–59. A medium-sized oval glossy yellowish green bean, mottled with dark brown, with a pale hilum.

84752. No. 2306. Station No. C–2. A medium-sized oval brown bean, marked with black arranged in concentric rings. Similar to Meyer (No. 17852) type.

84753. No. 2307. Station No. C–3. A medium-sized oval brown bean with black concentric rings. Similar to the Meyer (No. 17852).

84754. No. 2308. Station No. C–4. A medium-sized oval black and brown bean.

84755. No. 2309. Station No. C–5. A medium-sized oval slightly flattened brown bean with black concentric bands. Similar to the Meyer (No. 17852) type.

84756. No. 2310. Station No. C–6. A medium-sized oval brown bean with black concentric rings. Of the Meyer (No. 17852) type.

84757. No. 2311. Station No. C–7. A medium-sized oval glossy brown bean with black arranged in concentric rings. Of the Meyer (No. 17852) type.

84758. No. 2312. Station No. C–8. A medium-small oval slightly flattened brown bean with black in concentric rings. Of the Meyer (No. 17852) type.

84759. No. 2313. Station No. C–9. A medium-sized oval glossy olive-brown bean marked with black concentric rings.

84760. No. 2314. Station No. C–10. A medium-large oval slightly flattened brown bean with black in concentric rings and the testa more or less split. Of the Meyer (No. 17852) type.

84569 to 85023—Continued.

84761. No. 2315. Station No. C–11. A medium-small oval slightly flattened brown bean with faint black concentric rings.

84762. No. 2316. Station No. C–12. A medium-small oval brown bean with faint black concentric bands.

84763. No. 2317. Station No. C–13. A medium-sized oval glossy brown bean with faint black concentric marking.

84764. No. 2318. Station No. C–14. A medium-sized oval brown bean marked with black in concentric rings. Of the Meyer (No. 17852) type.

84765. No. 2319. Station No. C–15. A medium-sized oval brown bean with black in concentric bands. Of the Meyer (No. 17852) type.

84766. No. 2320. Station No. C–16. A medium-sized oval brown bean with black arranged in concentric bands. Of the Meyer (No. 17852) type.

84767. No. 2321. Station No. C–17. A medium-small oval glossy brown bean with a few faint concentric black bands.

84768. No. 2322. Station No. C–18. A medium-small glossy brown seed marked with faint black concentric rings.

84769. No. 2323. Station No. C–19. A medium-sized oval dark reddish brown seed.

84770. No. 2324. Station No. C–20. A large oval brown bean with black markings arranged in concentric bands.

84771. No. 2325. Station No. C–21. A medium-sized oval brown bean with black markings arranged in concentric bands. Of the Meyer (No. 17852) type.

84772. No. 2326. Station No. C–22. A medium-sized oval brown bean marked with black in concentric bands. Of the Meyer (No. 17852) type.

84773. No. 2327. Station No. C–23. A medium-sized oval brown bean marked with black in concentric bands.

84774. No. 2328. Station No. C–24. A medium-sized brown bean with some cloudy (black) markings.

84775. No. 2329. Station No. C–25. A medium-small round brown bean with black markings in concentric bands.

84776. No. 2330. Station No. C–26. A medium-small round brown bean marked with rather faint concentric black bands.

84777. No. 2331. Station No. C–27. A medium-sized oval glossy yellow bean, heavily mottled with brown, with a pale hilum.

84778. No. 2332. Station No. C–29. A medium-sized oval yellow bean with brown markings; some have black and brown markings. The hilum is light brown with a prominent brown dot at one end.

84569 to 85023—Continued.

84779. No. 2333. Station No. C–30. A medium-sized nearly round glossy dark-brown and yellow bean with a light-brown hilum.

84780. No. 2334. Station No. C–31. A medium-sized nearly round glossy yellow and black bean with a brown hilum.

84781. No. 2335. Station No. C–32. Medium-sized oval slightly flattened black beans with some brown.

84782. No. 2336. Station No. C–33. A medium-sized oval slightly flattened black and yellow bean.

84783. No. 2337. Station No. C–34. A medium-sized, oval, slightly flattened black bean with yellow markings and a black hilum.

84784. No. 2338. Station No. C–35. A medium-large, much flattened black bean with greenish yellow markings along the edge of the seed.

84785. No. 2339. Station No. C–36. A medium-large flat black seed with markings of olive green. May have value as a green vegetable.

84786. No. 2340. Station No. (?) 37. A medium-large, long oval, slightly flattened black bean with greenish yellow markings.

84787. No. 2341. Station No. C–38. A large oval black and olive-brown bean with the testa split on some seeds.

84788. No. 2342. Station No. C–39. A medium-sized oval glossy coffee-brown seed.

84789. No. 2343. Station No. C–40. A medium-small oval glossy coffee-brown seed.

84790. No. 2344. Station No. C–41. A medium-large, much-flattened, oval black bean with yellow markings along the edge.

84791. No. 2345. Station No. C–42. A medium-small oval reddish brown bean with yellow markings.

84792. No. 2346. Station No. C–1. A medium-sized, oval, slightly flattened brown bean marked with black concentric rings. Of the Meyer (No. 17852) type.

84793. No. 2347. Station No. Q–1. A small round yellow bean, slightly mottled with brown and with a brown hilum. This should be an excellent variety for sprouts.

84794. No. 2348. Station No. Q–2. A medium-sized oval glossy yellow bean, slightly mottled with brown, with a slate-black hilum.

84795. No. 2349. Station No. Q–3. A medium-small oval greenish yellow bean, slightly mottled with black and having a long black hilum.

84796. No. 2350. Station No. Q–4. A medium-small oval light-green bean, slightly mottled with brown, with a brown hilum.

84569 to 85023—Continued.

84797. No. 2351. Station No. Q–5. A medium-sized oval yellow bean, mottled with brown, with a brown hilum.

84798. No. 2352. Station No. Q–6. A medium-sized oval light-yellow bean, mottled with dark brown and with a long dark hilum.

84799. No. 2353. Station No. Q–7. A medium-small oval yellow bean, much mottled with brown, with a dark-brown hilum.

84800. No. 2354. Station No. ?. A medium-sized, long oval, slightly flattened glossy black bean.

84801. No. 2355. Station No. Q–9. A small oval glossy yellow bean with light-brown hilum. It is slightly mottled with brown and should make an excellent variety for sprouting.

84802. No. 2356. Station No. I–1. A medium-sized oval green bean, mottled with black and with a black hilum.

84803. No. 2357. Station No. I–2. A medium-sized oval yellowish green bean with a black hilum and mottled with black.

84804. No. 2358. Station No. I–3. A medium-sized oval glossy olive-green bean with a black hilum and mottled with black.

84805. No. 2359. Station No. I–4. A medium-large oval olive-green bean with a black hilum. Mottled with black.

84806. No. 2360. Station No. I–5. A medium-sized oval olive-green bean, mottled with brown and with a black hilum.

84807. No. 2361. Station No. I–6. A medium-small oval olive-green bean, mottled with black and with a black hilum.

84808. No. 2362. Station No. I–7. A medium-sized oval brown bean, marked with black in concentric bands, similar to the Meyer variety (No. 17852).

84809. No. 2363. Station No. I–8. A medium-sized oval glossy olive-green bean, mottled with black and with a black hilum.

84810. No. 2364. Station No. I–9. A large oval bluish black and olive-green bean with a black hilum.

84811. No. 2365. Station No. I–10. A medium-sized oval glossy olive-green bean with a black hilum.

84812. No. 2366. Station No. I–11. A medium-sized, oval, bluish olive-green (indigo) bean, mottled with black, with a black hilum.

84813. No. 2367. Station No. I–12. A medium-sized oval olive-green bean, mottled with black and with a black hilum.

84814. No. 2368. Station No. I–13. A medium-sized, bluish black, olive-yellow bean with a black hilum.

84815. No. 2369. Station No. I–14. A medium-sized, nearly round, bluish olive-green bean, mottled with black and with a black hilum.

84816. No. 2370. Station No. I–15. A medium-sized oval olive-green bean, mottled with black and with a black hilum.

84817. No. 2371. Station No. I–16. A medium-sized, oval, bluish olive-green (indigo) bean with a black hilum.

84818. No. 2372. Station No. I–17. A medium-large, oval, bluish olive-green (indigo) bean with a black hilum.

84819. No. 2373. Station No. I–18. A medium-sized bluish black (indigo) bean with a black hilum.

84820. No. 2374. Station No. I–19. A medium-small oval bluish black (indigo) and olive-green bean with a black hilum.

84821. No. 2375. Station No. I–20. A medium-sized, nearly round bluish green (indigo) bean.

84822. No. 2376. Station No. I–21. A medium-sized oval bluish black (indigo) bean, tinged with olive green and with a black hilum.

84823. No. 2377. Station No. I–22. A medium-sized bluish olive-green bean with a black hilum. Classed as *Indigo*.

84824. No. 2378. Station No. I–23. A medium-large glossy greenish yellow bean with a black hilum.

84825. No. 2379. Station No. I–24. A medium-sized oval glossy olive-green bean, mottled with black and with a black hilum.

84826. No. 2380. Station No. I–25. A medium-large bluish olive-green (indigo) bean with a black hilum.

84827. No. 2381. Station No. I–26. A medium-large oval bluish olive-green (indigo) bean with a black hilum.

84828. No. 2382. Station No. I–27. A medium-sized oval olive-green bean, mottled with black and with a black hilum.

84829. No. 2383. Station No. I–28. A medium-sized, nearly round, bluish black (indigo) bean.

84830. No. 2384. Station No. I–29. A medium-large oval black and olive-green bean with a black hilum.

84831. No. 2385. Station No. I–30. A large bluish yellow-green, nearly round bean, with a black hilum.

84832. No. 2386. Station No. Br.–1. A medium-sized oval light yellowish brown bean with a brown hilum.

84833. No. 2387. Station No. Br.–2. A medium-sized oval yellowish brown bean with a dark-brown hilum.

84834. No. 2388. Station No. Br.–3. A medium-large oval light yellowish brown bean with a dark-brown hilum.

84569 to 85023—Continued.

84835. No. 2389. Station No. Br.–4. A very small round cinnamon-brown bean which should be a good variety for sprouts.

84836. No. 2390. Station No. Br.–5. A medium-sized, nearly round, reddish brown bean with a dark-brown hilum.

84837. No. 2391. Station No. Br.–6. A medium-sized oval reddish brown bean with a brown hilum.

84838. No. 2392. Station No. Br.–7. A medium-sized, nearly round, reddish brown bean with a dark-brown hilum.

84839. No. 2393. Station No. Br.–8. A medium-sized oval reddish brown bean with a brown hilum.

84840. No. 2394. Station No. Br.–9. A medium-sized, oval, slightly flattened brown bean.

84841. No. 2395. Station No. Br.–10. A medium-sized oval glossy olive-brown bean.

84842. No. 2396. Station No. Br.–11. A medium-sized oval yellowish brown bean.

84843. No. 2397. Station No. Br.–12. A medium-sized, oval, slightly flattened brown bean tinged with yellow.

84844. No. 2398. Station No. Br.–13. A medium-sized long oval brown (yellowish) bean.

84845. No. 2399. Station No. Br.–15. A medium-small, nearly round, coffee-brown bean which may be of value for sprouts.

84846. No. 2400. Station No. Br.–16. A medium-sized oval coffee-brown bean.

84847. No. 2401. Station No. Br.–17. A small, oval, much-flattened brown bean.

84848. No. 2402. Station No. Br.–18. A medium-sized, oval, glossy, slightly flattened, reddish brown bean.

84849. No. 2403. Station No. Br.–19. A medium-small, oval, slightly flattened brown bean.

84850. No. 2404. Station No. Br.–20. A medium-sized oval glossy brown bean.

84851. No. 2405. Station No. Br.–21. A medium-small oval glossy dark-brown bean.

84852. No. 2406. Station No. Br.–22. A medium-small oval glossy brown bean.

84853. No. 2407. Station No. Br.–23. A medium-sized, oval, slightly flattened, reddish brown bean.

84854. No. 2408. Station No. Br.–24. A medium-sized, oval, slightly flattened brown bean.

84855. No. 2409. Station No. Br.–25. A medium-large, oval, dark glossy brown bean.

84856. No. 2410. Station No. Br.–26. A medium-large, oval, slightly flattened, dark-brown bean with a yellow tinge on the sides.

84569 to 85023—Continued.

84857. No. 2411. Station No. Br.–27. A medium-large oval dark-brown bean with a yellow tinge on the sides.

84858. No. 2412. Station No. Br.–29. A medium-sized oval dark-brown bean.

84859. No. 2413. Station No. Br.–30. A large oval dark-brown bean with a yellowish tinge on the sides.

84860. No. 2414. Station No. Br.–31. A medium-large oval dark-brown bean, tinged with yellow on the sides.

84861. No. 2415. Station No. Br.–32. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84862. No. 2416. Station No. Br.–33. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84863. No. 2417. Station No. Br.–34. A medium-large dark-brown bean with slightly split testa.

84864. No. 2418. Station No. Br.–35. A medium-small, oval, much flattened, dark-brown bean.

84865. No. 2419. Station No. Br.–36. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84866. No. 2420. Station No. Br.–37. A medium-sized oval dark-brown bean with a yellow tinge about the hilum.

84867. No. 2421. Station No. Br.–38. A medium-large oval dark-brown bean with slightly split testa.

84868. No. 2422. Station No. Br.–39. A medium-large oval dark-brown bean.

84869. No. 2423. Station No. Br.–40. A medium-sized oval glossy dark-brown bean.

84870. No. 2424. Station No. Br.–41. A medium-sized oval glossy brown bean.

84871. No. 2425. Station No. Br.–42. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84872. No. 2426. Station No. Br.–43. A medium-large oval dark-brown bean with the testa slightly split.

84873. No. 2427. Station No. Br.–44. A medium-large oval dark-brown bean with a slight yellow tinge on the sides.

84874. No. 2428. Station No. Br.–45. A medium-sized, nearly round dark-brown bean.

84875. No. 2429. Station No. Br.–46. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84876. No. 2430. Station No. Br.–47. A medium-sized oval dark-brown bean.

84877. No. 2431. Station No. Br.–48. A medium-large oval dark-brown bean with a yellow tinge on the sides.

84569 to 85023—Continued.

84878. No. 2432. Station No. Br.–49. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84879. No. 2433. Station No. Br.–50. A medium-sized oval dark-brown bean with a yellow tinge about the sides and the hilum.

84880. No. 2434. Station No. Br.–51. A medium-large oval dark-brown bean with yellow marks on the sides and about the hilum.

84881. No. 2435. Station No. Br.–52. A medium-sized oval dark-brown bean with a slight yellowish tinge about the hilum.

84882. No. 2436. Station No. Br.–53. A medium-sized oval dark-brown bean.

84883. No. 2437. Station No. Br.–54. A medium-sized oval dark-brown bean with a yellow tinge on the sides.

84884. No. 2438. Station No. Br.–55. A medium-large oval dull dark-brown bean with the testa more or less split.

84885. No. 2439. Station No. Br.–56. A medium-large oval brown bean with a yellow-tinged edge and the testa split on the sides.

84886. No. 2440. Station No. Br.–57. A medium-large oval dark-brown bean.

84887. No. 2453. Station No. Br.–70. A medium-sized oval glossy yellow bean, tinged with darker yellow.

84888. No. 2454. Station No. Br.–71. A medium-sized oval dark-brown bean.

84889. No. 2455. Station No. Br.–72. A medium-small oval glossy brown bean.

84890. No. 2456. Station No. Br.–73. A medium-sized glossy brown bean, slightly tinged with yellow.

84891. No. 2457. Station No. Br.–74. A medium-sized oval glossy brown bean.

84892. No. 2458. Station No. Br.–75. A medium-small oval glossy brown bean, tinged with yellow.

84893. No. 2459. Station No. Br.–76. A medium-large oval brown bean with the testa more or less split.

84894. No. 2460. Station No. Br.–77. A medium-large oval glossy coffee-brown bean with a yellow tinge on the sides.

84895. No. 2461. Station No. Br.–78. A medium-large oval coffee-brown bean with the testa split more or less on the sides.

84896. No. 2462. Station No. Br.–79. A medium-sized oval dark-brown bean with the testa split on the sides into a fine network.

84897. No. 2463. Station No. Br.–80. A medium-sized oval reddish brown bean, tinged with yellow on the sides.

84569 to 85023—Continued.

84898. No. 2464. Station No. Br.–81. A medium-large, long oval, slightly flattened bean with the testa split on the sides into a fine network.

84899. No. 2465. Station No. Br.–82. A medium-sized oval brown bean with the testa split on the sides into a fine network.

84900. No. 2466. Station No. Br.–83. A medium-sized oval brown bean with the testa split on the sides into a fine network.

84901. No. 2467. Station No. Br.–84. A medium-sized, oval, slightly flattened bean with the testa on the sides split into a fine network.

84902. No. 2468. Station No. Br.–85. A medium-sized, oval, slightly flattened, glossy brown bean with the testa split into a fine network.

84903. No. 2469. Station No. Br.–86. A medium-large oval brown bean with the testa on the sides split into a fine network.

84904. No. 2470. Station No. Br.–87. A medium-sized oval brown bean with the testa on the sides split into a fine network.

84905 to 84933. From the Heisan-Nando Seed and Nursery Farm, Heijo, Chosen, December 12, 1929.

84905. No. 3201. *Suigen Juyo.* A medium-large, nearly round yellow bean with a dark-brown hilum; more or less mottled with brown and the testa split in some cases.

84906. No. 3202. *Annen.* A medium-sized, nearly round glossy greenish-yellow bean with a light-brown hilum.

84907. No. 3203. *Gishu Tansen.* A medium-sized oval glossy yellow bean with a pale hilum and the testa more or less split.

84908. No. 3204. *Chotan Shirome* (called Chotan white eye). A medium-sized oval glossy yellow bean with a pale hilum.

84909. No. 3205. *Akazaya.* A medium-small to medium-sized oval bean with a dark-brown hilum.

84910. No. 3206. *Tsurunoko.* A medium-sized oval yellow bean with a pale hilum.

84911. No. 3207. *Hakuo Seizu.* A medium-sized oval glossy greenish yellow bean with a brown hilum.

84912. No. 3208. *Gin Daizu.* A medium-sized oval yellow bean with a hilum varying from light to dark brown.

84913. No. 3209. *Kuro Churu.* A medium-sized much-flattened oval black bean.

84914. No. 3210. *Ngoiju.* A medium-small round yellow bean, very heavily mottled with brown and with a brown hilum.

84915. No. 3211. *Tansen Usuao.* A medium-sized oval glossy yellow bean with a light bluish black hilum.

84569 to 85023—Continued.

84916. No. 3212. *Chotan.* A medium-sized oval glossy yellow bean with a pale hilum. Used for bean curd, miso, natto, and soy sauce.

84917. No. 3213. *Oyachi.* A medium-sized oval glossy yellow bean, heavily mottled with dark brown and with a brown hilum.

84918. No. 3214. *Ragai Seizu.* A mixture of medium-large oval green and yellowish green beans with black hilums.

84919. No. 3215. *Oiarukon.* A medium-large oval glossy yellow bean with a pale to light-brown hilum. The testa is more or less split.

84920. No. 3216. *Amekisetsu.* A medium-sized oval glossy yellow bean with a pale hilum. Used in making bean curd, miso, soy sauce, and natto.

84921. No. 3217. *Koshurei.* A medium-small oval pale-yellow bean with a pale hilum which has a small brown dot at the chalazal end.

84922. No. 3218. *Heijo.* A medium-sized oval glossy yellow bean with a pale to light-brown hilum. Used for bean curd, natto, miso, and soy sauce.

84923. No. 3219. *Yoshioka Chūryū.* A medium-sized oval greenish yellow bean, slightly mottled with black and with a black hilum.

84924. No. 3220. *Heihoku dai.* A medium-large oval yellow bean with the testa more or less split and a pale to light-brown hilum.

84925. No. 3221. *Hokkaido.* A medium-large oval glossy yellow bean with the hilum varying from pale to light slate black.

84926. No. 3222. *Kinkou.* A medium-sized oval glossy yellow bean with a brown hilum. Used for bean curd, miso, soy sauce, and natto.

84927. No. 3223. *Tetsuzaya Aozu.* A medium-sized, nearly round, greenish yellow bean with a dark-brown hilum.

84928. No. 3224. *Kanro.* A medium-sized, nearly round, dull yellow bean, slightly mottled with brown, with a pale hilum.

84929. No. 3225. *Ishikari haku.* A medium-small, oval, slightly flattened, yellow to greenish yellow bean with a pale to dark-brown hilum.

84930. No. 3226. *Kuro Saya.* A mixture of medium-small oval greenish yellow beans and medium-sized round yellow beans, with brown hilums.

84931. No. 3227. *Chōtan Chame* (Chotan brown eye). A medium-large oval glossy yellow bean with a long rather wide dark-brown hilum.

84932. No. 3228. *Ekizen.* A medium-sized oval glossy yellow bean with a pale hilum. Used for bean curd, miso, natto, and soy sauce.

84569 to 85023—Continued.

84933. No. 3229. *Chōtan Shirome.* A medium-sized oval glossy yellow bean with a pale hilum. Used for bean curd, miso, natto, and soy sauce.

84934 to 84950. From a Korean grain store in Fusan, December 7, 1929.

84934. No. 3401. *Kirugunkon.* A medium-small oval green bean with a brown hilum. Used for sprouting.

84935. No. 3402. *Chunkon.* A medium-sized oval yellow bean with a brown hilum. Used for soy sauce, bean curd, and soy miso.

84936. No. 3403. *Konkirukon.* A medium-small green oval bean with a brown hilum; used for sprouting.

84937. No. 3404. *Pakute.* A large, nearly round, yellow bean with a pale hilum; used for miso and as a boiled bean with other foods.

84938. No. 3405. *Kaundō pakute.* A medium-large, nearly round, yellow bean with a pale hilum; used for miso, bean curd, and soy sauce.

84939. No. 3406. *Kaundokon.* A mixed sample of yellow varieties which are used for miso.

84940. No. 3407. *Kaundokon.* A mixed sample of yellow varieties which are used for miso.

84941. No. 3408. *Komujankon.* A medium-large oval black bean; used as candied beans.

84942. No. 3409. *Chankon.* A mixture of medium-sized oval yellow beans with a brown hilum and yellow beans with a pale hilum. They are used for miso, bean curd, and soy sauce.

84943. No. 3410. *Kirugunkon.* A medium-sized, oval, slightly flattened yellow bean with a brown hilum; used for miso.

84944. No. 3411. *Hinkon.* A medium-sized, nearly round yellow bean with a pale hilum; used for miso, bean curd, and soy sauce.

84945. No. 3412. *Purukon.* A mixed sample of yellow strains, varying from medium small to very large, which are used for miso.

84946. No. 3413. *Kandōkon.* A large, nearly round yellow bean with a pale hilum; used for miso and as boiled beans with other foods.

84947. No. 3414. *Kirugunkon.* A medium-sized, oval, somewhat flattened greenish yellow bean with a brown hilum; is used for bean sprouts.

84948. No. 3415. *Chiyonkon.* A medium-sized, oval, somewhat flattened greenish yellow bean with a brown hilum; is used for bean sprouts.

84949. No. 3416. *Taikyu Hinkon.* A medium-sized oval yellow bean with a brown hilum; used for miso, soy sauce, and bean curd.

84950. No. 3417. *Chinkon.* A mixed sample of yellow varieties which are used for bean curd, miso, and soy sauce.

84569 to 85023—Continued.

84951 to 84955. From a grain warehouse in Kiho, Chosen, December 7, 1929.

84951. No. 3418. *Rakutonkon.* A mixed sample of yellow varieties which vary in size, shape, and color of hilum. They are used for miso and as boiled beans.

84952. No. 3419. *Parankon.* A mixed sample of yellow varieties, varying in size, shape, color of seed, and color of hilum. They are used in making miso and as boiled beans.

84953. No. 3420. *Chirugunkon.* A medium-small, oval, slightly flattened green bean with a brown hilum; used for bean sprouts.

84954. No. 3421. *Hinkon.* A mixed sample of yellow varieties which vary in size, shape, and color of the hilum. They are used for making miso, natto, and soy sauce.

84955. No. 3422. *Komujonkon.* A large, oval, much flattened black bean, used in making candied beans and bean paste.

84956 to 84962. From a grain merchant in Shimonoseki, Japan, December 8, 1929.

84956. No. 3423. *Kinko-daizu.* A mixture of medium-sized glossy yellow beans with pale hilums and larger yellow beans with brown hilums; used for natto, miso, and soy sauce.

84957. No. 3424. *Yamki-daizu.* A mixture of yellow varieties, varying from medium small to medium in size, used for miso and natto.

84958. No. 3425. *Joshin-daizu.* A medium-large glossy yellow bean with a pale hilum; used for bean curd, miso, and soy sauce. The sample contains a few other yellow beans.

84959. No. 3426. *Shingishu-daizu.* A medium-small, nearly round glossy yellow bean with a slate-black hilum; used for natto, miso, and soy sauce.

84960. No. 3427. *Hakusen daizu.* A medium-sized oval glossy yellow bean with a pale hilum; used for miso, soy sauce, and natto. The sample contains a few beans with brown hilums.

84961. No. 3428. *Joshin-daizu.* A medium-large oval glossy yellow bean with a pale hilum; used for bean curd, soy sauce, miso, and natto.

84962. No. 3429. *Chōtan-daizu.* A medium-sized oval glossy yellow bean with a pale hilum; used for bean curd, soy sauce, miso, and natto.

84963 to 84969. From a grain merchant in Kobe, Japan, December 9, 1929.

84963. No. 3431. *Genzan.* A medium-sized oval glossy yellow bean with a pale hilum; used for bean curd, miso, and natto.

84964. No. 3432. *Manchurian Improved.* A medium-sized nearly round yellow bean with a pale hilum.

84569 to 85023—Continued.

84965. No. 3433. *Kwainei.* A medium-small to medium-sized oval yellow bean with a pale hilum; used for miso, soy sauce, and natto.

84966. No. 3434. *Chinan.* Classified as fourth grade. A mixed sample of yellow varieties, which vary in size, shape, and color of the hilum.

84967. No. 3435. *Shariin.* Classified as third grade. A medium-sized oval glossy yellow bean with a pale hilum; used for bean curd, soy sauce, miso, and natto.

84968. No. 3436. *Genzan.* Classified as third grade. A medium-sized oval glossy yellow bean with a pale hilum; used for soy sauce and miso.

84969. No. 3437. *Joshin.* A medium-sized nearly round glossy yellow bean with a pale hilum; used for bean curd, soy sauce, miso, and natto.

84970 and 84971. From a merchant in the Kyoto market, Kyoto, Japan, December 10, 1929.

84970. No. 3438. *Hokkaido Black.* A very large oval black bean which is used for soybean confections.

84971. No. 3439. *Hokkaido Tsurunoko.* A very large oval yellow bean with a pale hilum; used for miso, soy sauce, bean curd, and soybean confections.

84972 to 85017. From the Saitama Agricultural Experiment Station, Urawa, Japan, December 11, 1929.

84972. No. 3443. *Mizu kuguri.* A medium-sized oval yellow bean with a brown hilum.

84973. No. 3444. *Takiya.* A medium-small bean with a brown hilum.

84974. No. 3445. *Ichii.* A medium-sized pale dull-yellow bean with a brown hilum.

84975. No. 3446. *Aodaizo.* A medium-sized oval green bean with a brown hilum.

84976. No. 3447. Breeding Station selection. A medium-small oval yellow bean with a brown hilum.

84977. No. 3448. *Tamanishiki.* A medium-sized oval pale dull yellow bean with a russet-brown hilum.

84978. No. 3449. *Kimusume.* A medium-small oval yellow bean with a dark-brown hilum.

84979. No. 3450. *Shakkin Nashi.* A medium-sized oval yellow bean with a pale hilum.

84980. No. 3451. *Itachi.* A medium-small oval yellow bean with a russet-brown hilum.

84981. No. 3452. *Okita.* A medium-sized round yellow bean, somewhat mottled with brown, which has a dark-brown hilum.

84982. No. 3453. *Junin Zuki.* A medium-sized round glossy yellow bean with a russet-brown hilum.

84569 to 85023—Continued.

84983. No. 3454. *Toppa.* A medium-small, somewhat flattened, pale yellow bean with a pale hilum.

84984. No. 3455. *Akazaya* (red pod). A medium-sized round dull-yellow bean, slightly mottled with brown and with a dark-brown hilum.

84985. No. 3456. *Shirohadaka Ju Nigo, White Smooth No. 12.* A medium-small to medium-sized oval yellow bean with a brown hilum.

84986. No. 3457. *Deki Sugi.* A medium-sized round yellow bean with a prominent brown hilum.

84987. No. 3458. *Oni hadaka.* A medium-small oval glossy yellow bean with a brown hilum.

84988. No. 3459. *Shirobana Ichizo.* A medium-sized oval yellow bean with a pale hilum.

84989. No. 3460. *Kefuri.* A medium-sized oval yellow bean with a brown hilum.

84990. No. 3461. *Doruma nigo.* A medium-sized, somewhat flattened, yellow bean with a pale-brown hilum.

84991. No. 3462. *Kinozaya.* A small nearly round yellow bean with a pale-brown hilum.

84992. No. 3463. *Shirobana nigo.* A medium-sized oval yellow bean with a pale-brown hilum.

84993. No. 3464. *Asahi.* A medium-sized round glossy yellow bean with a russet-brown hilum.

84994. No. 3465. *Sakidaizu.* A medium-large oval yellow bean with a brown hilum.

84995. No. 3466. *Dairin.* A medium-sized, nearly round yellow bean with a dark-brown hilum.

84996. No. 3467. *Shimabara Wase.* A medium-small oval yellow bean with a russet-brown hilum.

84997. No. 3468. *Kochi Kimusume.* A medium-sized oval yellow bean with a brown hilum.

84998. No. 3469. *Bankoshi.* A medium-small oval yellow bean with a brown hilum.

84999. No. 3470. *Shirome Sanju Co. White Eye No. 35.* A medium-small oval pale yellow bean with a pale hilum.

85000. No. 3471. *Saitama Kiizaya.* A medium-small dull yellow bean with a brown hilum.

85001. No. 3472. *Iwate Yagi Ichigo, No. 1.* A medium-sized yellow bean with a brown hilum.

85002. No. 3473. *Kizaya.* A medium-small, nearly round pale yellow bean with a dark-brown hilum.

85003. No. 3474. *Akasaga.* A medium-sized round pale yellow bean with a brown hilum.

85004. No. 3475. *Bonhaku.* A medium-small oval pale yellow bean with a light-brown hilum.

84569 to 85023—Continued.

85005. No. 3476. *Shiro tama.* A medium-small round pale-yellow bean with a pale hilum.

85006. No. 3477. *Gion Sanyu Ichigo, Gion No. 31.* A medium-small oval pale-yellow bean with a pale hilum.

85007. No. 3478. *Aoji.* A medium-small pale-yellow bean with a prominent dark-brown hilum.

85008. No. 3479. *Chujiku* (middle season). A medium-sized round yellow bean with a russet-brown hilum.

85009. No. 3480. *Maruba daizu.* A medium-small oval pale-yellow bean with a light-brown hilum.

85010. No. 3481. *Yagi.* A medium-sized, nearly round, somewhat cloudy yellow beans with hilums which vary from pale to dark brown.

85011. No. 3482. *Ani* (brother). A medium-sized round glossy yellow bean with a dark-brown hilum.

85012. No. 3483. *Kurozaya Kin.* A medium-small pale-yellow bean with a pale hilum.

85013. No. 3484. *Akidaizu* (fall soybean). A medium-large oval yellow bean with a pale hilum.

85014. No. 3485. *Kindaizu.* A medium-small pale-yellow bean with a dark-brown hilum.

85015. No. 3486. *Kuro daizu.* A medium-large, nearly round black bean, which is used for confections.

85016. No. 3487. *Robiki daizu.* A medium-small oval glossy yellow bean with a russet-brown hilum.

85017. No. 3488. *Gin daizu.* A medium-sized, oval, somewhat flattened yellow bean with a brown hilum.

85018 to 85033. From the Heisan-Nando Seed and Nursery Farm, Heijo Chosen, December 12, 1929.

85018. No. 3495. *Kinpai.* A medium-large round glossy yellow bean with a long brown hilum and the testa more or less split. A few of the beans have a slate-black hilum.

85019. No. 3496. *Kohouju.* A medium-small round yellow bean, very much mottled with brown, which has a brown hilum.

85020. No. 3497. *Hakuta.* A medium-sized oval glossy yellow bean with a pale hilum and the testa more or less split.

85021. No. 3498. *Hoten Shirome.* A medium-sized oval pale-yellow bean, more or less mottled with brown, with a pale hilum.

85022. No. 3499. *Yaki.* A medium-sized nearly round glossy yellow bean with a brown hilum.

85023. No. 3500. *Youtou.* A medium-large oval yellow bean with a pale hilum and the testa much split.

85024 to 85026.

From Japan. Seeds presented by T. Watanbe, Forest Experiment Station, Keijo, Chosen, through P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 26, 1929. Numbered in January, 1930.

85024. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

Variety *dulcis*. From Hosen.

85025. QUERCUS MONGOLICA Fisch. Fagaceae. **Mongolian oak.**

From Keizanchin. A tall handsome oak, native to northeastern Asia, becoming 100 feet tall. The short-stemmed, dark-green, coarsely toothed leaves, 6 to 8 inches long, are crowded toward the ends of the twigs.

For previous introduction see No. 70788.

85026. (Undetermined.)

85027. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Lima, Peru. Seeds presented by J. Gaudron, Estacion Central Agronomica. Received January 30, 1930.

Wild tomatoes from near Lima, Peru.

85028. ATALANTIA MISSIONIS (Wight) Oliver. Rutaceae.

From Colombo, Ceylon. Seeds presented by S. Anthonipellari, Office of Medical and Sanitary Service. Received January 27, 1930.

A small tree, much resembling an orange tree in habit, with pale-gray bark and branches armed with short stiff spines, rather large stiff leaves with indistinct veining, and very sweet, white flowers. The fruit is like a small dark orange. The pale, yellowish white wood is close-grained, smooth, and suitable for cabinetwork, picture frames, and furniture.

85029. FAGELIA POLYRHIZA (Cav.) Kuntze (*Calceolaria polyrhiza* Cav.). Scrophulariaceae. **Calceolaria.**

From Herts, England. Seeds purchased from Clarence Elliott (Ltd.), Stevenage. Received January 25, 1930.

A dwarf, tufted, herbaceous perennial with lanceolate leaves and dark-yellow, sac-like flowers with purple spots. Native to South America.

85030. UAPACA KIRKIANA Muell. Arg. Euphorbiaceae.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson, American Board Mission. Received January 13, 1930.

Majanji. A robust, umbrella-shaped tree with stout branchlets, thinly coriaceous obovate leaves 3 to 10 inches long, undulate on the margin, and fascicles of inconspicuous flowers followed by subglobose, edible fruits about an inch in diameter. It is native to the Mozambique district of tropical Africa.

For previous introduction see No. 54967.

85031. AGROSTIS sp. Poaceae. **Grass.**

From Fauresmith, Union of South Africa. Seeds presented by M. Henrici, Officer in Charge, Veld Reserve. Received January 29, 1930.

Received as *Puccinellia angusta*, but the seeds do not agree with the description of that species.

85032 to 85039.

From Tunis, Tunisia. Scions presented by the Director, Jardin d'Essais, Sfax. Received February 8, 1930.

85032. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

No. 59. *Pêcher Townsi.*

85033. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

No. 60. *Pêcher tardif de Sfax* (late Sfax).

85034. PRUNUS sp. Amygdalaceae. **Plum.**

No. 58. *Prunier cerise*, variete *tunisienne.*

85035 to 85039. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

85035. *Abricotier le plus précoce.*

85036. *Abricotier Chechi.*

85037. *Abricotier Senaddui.*

85038. *Abricotier Oblong.*

85039. *Abricotier musque indigène.*

85040. AESCHYNOMENE sp. Fabaceae.

From Mandalay, Burma. Seeds presented by D. Rhind, Esq., I. A. S., Economic Botanist. Received January 31, 1930.

Collected December, 1929, from Hurawbi, Lower Burma.

Received as *Smithia sensitiva*, but the material does not agree with that genus.

85041 to 85046. VITIS VINIFERA L. Vitaceae. **European grape.**

From Enfield, Middlesex, England. Cuttings purchased from Stuart Low Co., Bush Hill Park. Received January 31, 1930.

85041. *Ascot citronella.*

85042. *Black muscadine.*

85043. *Canon Hall muscat.*

85044. *Grove End Sweetwater.*

85045. *Muscat of Hungary.*

85046. *White Nice.*

85047 to 85052.

From Acireale, Sicily. Bud sticks presented by Dr. H. S. Fawcett, University of California. Received February 1, 1930.

85047 to 85050. CITRUS spp. Rutaceae.

85047. CITRUS AURANTIUM L. **Seville orange.**

No. 34. From the R. Stazione Sperimentale de Agricultura. A sour orange of average standard type, which is used here for nursery stock.

85048. CITRUS LIMONIA Osbeck. **Lemon.**

No. 33. From the R. Stazione Sperimentale de Agricultura. A good

85047 to 85052—Continued.

standard type of lemon, trees vigorous; fruit good shape and fairly uniform on tree. The tree as grown here is intermediate in form between Lisbon and Eureka as grown in California. Bud union not overgrown with the sour stock.

85049. CITRUS MEDICA L. **Citron.**

No. 35. A good, well-shaped type, the best they have at the R. Stazione Sperimentale de Agricultura.

85050. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. **Mandarin orange.**

No. 36. From Catania, Sicily. A large, well-shaped, flat mandarin orange of good flavor and high color. The leaves seem broader and the fruits much better than any similar mandarins now growing at the California Agricultural Experiment Station.

85051. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. 37. A seedling of the second generation, selected by Dr. Gulio Savastano on the Van Mon's theory. The tree produces a crop of good fruit every year. It is smaller than the other seedlings, perhaps due to the heavy bearing of fruit.

85052. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

No. 38. An apricot said by Dr. Fenzi to be a natural hybrid.

85053 to 85673.

From Chosen and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 30, 1930.

85053 to 85671. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

85053 to 85660. From the Agricultural Experiment Station, Suigen, Chosen, December 2, 1929.

85053. No. 2441. Station No. Br. 58. A medium-sized oval dark-brown bean.

85054. No. 2442. Station No. Br. 59. A medium-sized oval glossy brown bean.

85055. No. 2443. Station No. Br. 60. A small oval glossy, dark-brown bean, which may be of value for sprouts.

85056. No. 2444. Station No. Br. 61. A medium-sized, oval, slightly flattened glossy brown bean.

85057. No. 2445. Station No. Br. 62. A medium-small, slightly flattened, oval, glossy brown bean.

85058. No. 2446. Station No. Br. 63. A medium-sized oval glossy brown bean, tinged with yellow.

85059. No. 2447. Station No. Br. 64. A medium-small oval, slightly flattened, glossy brown bean.

85060. No. 2448. Station No. Br. 65. A medium-sized oval brown bean.

85061. No. 2449. Station No. Br. 66. A medium-sized, slightly flattened brown bean.

85062. No. 2450. Station No. Br. 67. A medium-large oval glossy brown bean.

85053 to 85673—Continued.

85063. No. 2451. Station No. Br. 68. A medium-large oval glossy brown bean.

85064. No. 2452. Station No. Br. 69. A medium-sized, oval, slightly-flattened glossy brown bean.

85065. No. 2471. Station No. G–1. A medium-sized oval dark-brown bean with a green germ.

85066. No. 2472. Station No. G–2. A medium-sized dark-brown bean with a green germ.

85067. No. 2473. Station No. G–3. A medium-sized dark-brown bean with a green germ.

85068. No. 2474. Station No. G–4. A medium-sized oval dark-brown bean with a green germ.

85069. No. 2475. Station No. G–5. A medium-sized oval dark-brown bean with a green germ.

85070. No. 2476. Station No. G–6. A medium-sized, very dark brown bean with a green germ.

85071. No. 2477. Station No. G–9. A medium-large oval green bean with a black hilum.

85072. No. 2478. Station No. G–10. A medium-small greenish yellow bean, much mottled with green; hilum brown.

85073. No. 2479. Station No. G–11. A medium-sized oval green bean slightly mottled with black; hilum black; germ green.

85074. No. 2480. Station No. G–12. A medium-sized yellowish green bean; hilum black; germ green.

85075. No. 2481. Station No. G–13. A medium-sized oval green bean; hilum black; germ green.

85076. No. 2482. Station No. G–14. A medium-sized oval yellowish green bean; hilum slate black; germ green.

85077. No. 2483. Station No. G–15. A medium-sized oval green bean; hilum slate black; germ green.

85078. No. 2484. Station No. G–16. A medium-large oval yellowish green bean; hilum light slate black; germ green.

85079. No. 2485. Station No. G–17. A medium-sized oval yellowish green bean slightly mottled with black; hilum slate black; germ green.

85080. No. 2486. Station No. G–18. A medium-sized oval yellowish green bean with a slate-black hilum and a green germ.

85081. No. 2487. Station No. G–19. A medium-sized oval greenish yellow bean with a slate-black hilum and a green germ.

85082. No. 2488. Station No. G–20. A medium-sized oval yellowish green bean with a light slate-black hilum and a green germ.

85083. No. 2489. Station No. G–21. A medium-sized oval yellowish green bean with a slate-black hilum and a green germ.

85053 to 85673—Continued.

85084. No. 2490. Station No. G–22. A medium-sized oval green bean with a green germ and a slate-black hilum.

85085. No. 2491. Station No. G–23. A medium-sized oval green bean slightly mottled with brown; hilum brown; germ green.

85086. No. 2492. Station No. G–24. A medium-sized oval yellowish green bean slightly mottled with brown; hilum slate black; germ green.

85087. No. 2493. Station No. G–25. A medium-large oval yellowish green bean with a slate-black hilum.

85088. No. 2494. Station No. G–26. A medium-sized oval yellowish green bean slightly mottled with brown; hilum black.

85089. No. 2495. Station No. G–27. A medium-sized oval yellowish green bean mottled with black; hilum black; germ green.

85090. No. 2496. Station No. G–28. A medium-sized oval green bean slightly mottled with dark brown; hilum dark brown.

85091. No. 2497. Station No. G–29. A medium-sized oval green bean mottled with brown; hilum brown; germ green.

85092. No. 2498. Station No. G–30. A medium-sized oval green bean mottled with dark brown; hilum brown; germ green.

85093. No. 2499. Station No. G–32. A medium-sized oval yellowish green bean with the testa very wrinkled, the hilum brown, and the germ green.

85094. No. 2500. Station No. G–33. A medium-sized oval yellowish green bean mottled with dark brown; germ green; hilum long, large, and dark brown.

85095. No. 2501. Station No. G–34. A medium-large oval yellowish green bean slightly mottled with brown; hilum large and dark brown; germ green.

85096. No. 2502. Station No. G–35. A medium-sized oval greenish yellow bean slightly mottled with brown; hilum dark brown; germ green.

85097. No. 2503. A medium-small oval slightly flattened green bean with a dark brown hilum and a green germ.

85098. No. 2504. Station No. G–37. A medium-small oval yellowish green bean mottled with dark brown; hilum dark brown; germ green.

85099. No. 2505. Station No. G–38. A medium-small oval glossy yellowish green bean slightly mottled with dark brown; hilum brown; germ green.

85100. No. 2506. Station No. G–39. A medium-small oval yellowish green bean slightly mottled with brown; hilum brown; germ green.

85053 to 85673—Continued.

85101. No. 2507. Station No. G–40. A medium-sized oval green bean heavily mottled with dark brown; hilum large and dark brown; germ green.

85102. No. 2508. Station No. G–41. A medium-small, nearly round, yellowish green bean slightly mottled with dark brown; hilum dark brown; germ green.

85103. No. 2509. Station No. G–42. A medium-small, nearly round, yellowish green bean heavily mottled with dark brown; hilum dark brown; germ green.

85104. No. 2510. Station No. G–43. A medium-large oval glossy yellowish green bean with a brown hilum and a green germ.

85105. No. 2511. Station No. G–44. A medium-sized yellowish green bean with a dark-brown hilum and a green germ.

85106. No. 2512. Station No. G–45. A medium-sized oval glossy yellowish green bean with a black hilum and a green germ.

85107. No. 2513. Station No. G–46. A medium-sized oval olive-green bean mottled heavily with black; hilum black; germ yellow.

85108. No. 2514. Station No. G–47. A medium-large oval yellowish green bean slightly mottled with brown; hilum long and brown; germ green.

85109. No. 2515. Station No. G–48. A medium-small oval slightly flattened greenish yellow bean mottled with brown; hilum dark brown; germ green.

85110. No. 2516. Station No. G–49. A medium-small oval green bean mottled with brown; hilum russet brown; germ green.

85111. No. 2517. Station No. G–50. A medium-large oval green bean with a dark-brown hilum and a green germ.

85112. No. 2518. Station No. G–51. A medium-sized oval yellowish green bean heavily mottled with brown; hilum large and dark brown.

85113. No. 2519. Station No. G–52. A medium-sized oval green bean marked with dark-brown stripes; hilum dark brown; germ green.

85114. No. 2520. Station No. G–53. A medium-small oval yellowish green bean slightly mottled with brown; hilum russet brown; germ green.

85115. No. 2521. Station No. G–54. A medium-small oval yellowish green bean slightly mottled with brown; hilum brown; germ green.

85116. No. 2522. Station No. G–55. A medium-small oval green bean slightly mottled with brown; hilum brown; germ green.

85117. No. 2523. Station No. G–56. A small, nearly round, green bean slightly mottled with brown; hilum russet brown; germ green.

85053 to 85673—Continued.

85118. No. 2524. Station No. G–57. A medium-small oval green bean slightly mottled with brown; hilum brown; germ green.

85119. No. 2525. Station No. G–58. A small, nearly round yellowish green bean slightly mottled with brown; hilum pale brown; germ green. It may be of value for sprouting.

85120. No. 2526. Station No. G–59. A medium-small, nearly round green bean mottled with brown; hilum light russet brown; germ green.

85121. No. 2527. Station No. G–60. A medium-sized oval yellowish green bean with the testa wrinkled and slightly split; hilum russet brown; germ green.

85122. No. 2528. Station No. G–61. A medium-sized oval green bean with the testa slightly split; hilum brown; germ green.

85123. No. 2529. Station No. G–62. A medium-sized oval green bean with the testa slightly split; the hilum is russet brown and the germ green.

85124. No. 2530. Station No. G–63. A medium-sized oval green bean with russet-brown hilum and green germ.

85125. No. 2531. Station No. G–66. A medium-sized oval greenish yellow bean with russet-brown hilum and green germ.

85126. No. 2532. Station No. G–67. A medium-large oval yellowish green bean slightly mottled with brown; hilum brown; germ green.

85127. No. 2533. Station No. G–68. A medium-sized oval green bean with long dark-brown hilum and green germ.

85128. No. 2534. Station No. G–69. A medium-large oval green bean with the testa more or less split and mottled with brown; hilum large and brown; germ green.

85129. No. 2535. Station No. G–70. A medium-large oval yellowish green bean with the testa slightly split and sparsely mottled with brown; hilum large, long, and brown; germ green.

85130. No. 2536. Station No. G–71. A large oval yellowish green bean with the testa slightly split; hilum large and russet brown; germ green.

85131. No. 2537. Station No. G–72. A large oval yellowish green bean with a long large brown hilum and yellowish green germ.

85132. No. 2538. Station No. G–73. A medium-sized oval yellowish green bean slightly mottled with brown; hilum russet brown; germ green.

85133. No. 2539. Station No. G–74. A medium-large oval yellowish green bean slightly mottled with brown; hilum brown; germ green.

85134. No. 2540. Station No. G–75. A medium-sized oval green bean with a brown hilum.

85053 to 85673—Continued.

85135. No. 2541. Station No. G–76. A medium-sized oval yellowish green bean slightly mottled with brown; hilum brown; germ green.

85136. No. 2542. Station No. G–77. A medium-sized oval greenish yellow bean with brown hilum and a green germ.

85137. No. 2543. Station No. G–78. A small oval yellowish green bean slightly mottled with brown; hilum russet brown; germ green.

85138. No. 2544. Station No. G–79. A medium-small oval yellowish green bean mottled with brown; hilum russet brown; germ green.

85139. No. 2545. Station No. G–80. A medium-sized oval green bean with russet-brown hilum and green germ.

85140. No. 2546. Station No. G–81. A medium-sized oval yellowish green bean with russet-brown hilum and green germ.

85141. No. 2547. Station No. G–82. A medium-sized oval yellowish green bean with brown hilum and green germ.

85142. No. 2548. Station No. G–83. A large oval yellowish green bean with the testa more or less wrinkled, slightly split, and sparsely mottled with brown; hilum large and dark brown; germ green.

85143. No. 2549. Station No. G–84. A medium-sized oval yellowish green bean with russet-brown hilum and green germ.

85144. No. 2550. Station No. G–85. A medium-sized oval greenish yellow bean mottled with brown; hilum long, large, and brown; germ green.

85145. No. 2551. Station No. G–86. A medium-sized, nearly round yellowish green bean mottled with brown; hilum brown; germ yellow.

85146. No. 2552. Station No. G–87. A medium-sized oval green bean slightly mottled with brown; hilum dark brown; germ green.

85147. No. 2553. Station No. G–88. A medium-sized oval yellowish green bean slightly mottled with brown; hilum brown; germ green.

85148. No. 2554. Station No. G–89. Medium-small oval yellowish green bean with russet-brown hilum.

85149. No. 2555. Station No. G–90. A medium-large oval yellowish green bean with the testa more or less wrinkled and split; hilum brown and germ green.

85150. No. 2556. Station No. G–91. A medium-small oval yellowish green bean with russet hilum and green germ.

85151. No. 2557. Station No. G–92. A small oval yellowish green bean slightly mottled with brown; hilum brown.

85152. No. 2558. Station No. G–93. A medium-sized oval yellowish green bean with a large split in the testa; brown hilum and green germ.

85053 to 85673—Continued.

85153. No. 2559. Station No. G–94. A medium-small, oval, slightly flattened yellowish green bean heavily mottled with brown; hilum russet brown.

85154. No. 2560. Station No. G–95. A medium-sized oval greenish yellow bean with russet-brown hilum and green germ.

85155. No. 2561. Station No. G–96. A medium-sized oval green bean heavily mottled with dark brown; hilum light brown; germ green.

85156. No. 2562. Station No. G–97. A medium-small oval green bean mottled with brown; hilum brown; germ green.

85157. No. 2563. Station No. G–98. A medium-sized oval green bean with the testa streaked with white and slightly mottled with brown; hilum brown; germ green.

85158. No. 2564. Station No. G–99. A very small oval green bean slightly mottled with brown; hilum brown; germ green. It should be an excellent variety for sprouting.

85159. No. 2565. Station No. G–100. A medium-large oval greenish yellow bean mottled with brown; hilum brown; germ green.

85160. No. 2566. Station No. G–101. A medium-small oval greenish yellow bean slightly mottled with brown; hilum brown; germ green.

85161. No. 2567. Station No. G–102. A medium-sized oval yellowish green bean heavily mottled with brown; hilum light brown; germ green.

85162. No. 2568. Station No. G–103. A medium-sized oval yellowish green bean heavily mottled with brown; hilum dark brown; germ green.

85163. No. 2569. Station No. G–104. A medium-sized oval green bean with pale-brown hilum and green germ.

85164. No. 2570. Station No. G–105. A medium-sized oval glossy yellowish green bean mottled with brown; hilum brown; germ green.

85165. No. 2571. Station No. G–106. A medium-sized, oval, slightly flattened, yellowish green bean mottled with brown; hilum pale; germ green.

85166. No. 2572. Station No. B–1. A medium-small oval dull-black bean with a yellow germ.

85167. No. 2573. Station No. B–2. A large, nearly round, glossy black bean with the testa slightly split and a green germ.

85168. No. 2574. Station No. B–3. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85169. No. 2575. Station No. B–4. A medium-large, nearly round, dull-black bean.

85170. No. 2576. Station No. B–5. A medium-large oval dull-black bean with a yellow germ.

85053 to 85673—Continued.

85171. No. 2577. Station No. B–6. A medium-large, oval, slightly flattened, dull-black bean with a yellow germ.

85172. No. 2578. Station No. B–7. A medium-sized, oval, slightly flattened black bean with a yellow germ.

85173. No. 2579. Station No. B–8. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85174. No. 2580. Station No. B–9. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85175. No. 2581. Station No. B–10. A large oval dull-black bean with a yellow germ.

85176. No. 2582. Station No. B–11. A medium-sized, oval, slightly flattened, glossy black bean.

85177. No. 2583. Station No. B–12. A medium-sized oval dull-black bean.

85178. No. 2584. Station No. B–13. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85179. No. 2585. Station No. B–14. A medium-large oval dull-black bean.

85180. No. 2586. Station No. B–15. A medium-sized oval dull-black bean.

85181. No. 2587. Station No. B–16. A medium-large oval glossy black bean with a yellow germ.

85182. No. 2588. Station No. B–17. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85183. No. 2589. Station No. B–18. A medium-large, oval, slightly flattened, glossy black bean.

85184. No. 2590. Station No. B–19. A medium-sized oval glossy black bean with a green germ.

85185. No. 2591. Station No. B–20. A medium-sized oval glossy black bean with a yellow germ.

85186. No. 2592. Station No. B–21. A medium-sized oval slightly flattened dull-black bean.

85187. No. 2593. Station No. B–22. A medium-small oval dull-black bean.

85188. No. 2594. Station No. B–23. A medium-sized oval slightly flattened dull-black bean.

85189. No. 2595. Station No. B–24. A medium-sized oval slightly flattened glossy black bean.

85190. No. 2596. Station No. B–25. A medium-sized oval slightly flattened glossy black bean.

85191. No. 2597. Station No. B–26. A medium-sized oval dull-black bean with a yellow germ.

85192. No. 2598. Station No. B–27. A medium-small, nearly round, dull-black bean.

85053 to 85673—Continued.

85193. No. 2599. Station No. B–28. A medium-large oval dull-black bean with a yellow germ.

85194. No. 2600. Station No. B–29. A medium-sized oval slightly flattened glossy black bean with a yellow germ.

85195. No. 2601. Station No. B–30. A medium-sized oval slightly flattened glossy black bean with a yellow germ.

85196. No. 2602. Station No. B–31. A medium-sized oval slightly flattened dull-black bean with a yellow germ.

85197. No. 2603. Station No. B–32. A medium-sized oval slightly flattened glossy black bean with the testa slightly split and the germ yellow.

85198. No. 2604. Station No. B–33. A medium-sized oval dull-black bean with a yellow germ.

85199. No. 2605. Station No. B–34. A medium-sized oval slightly flattened glossy black bean with a yellow germ.

85200. No. 2606. Station No. B–35. A medium-sized oval glossy black bean with a yellow germ.

85201. No. 2607. Station No. B–36. A medium-sized oval glossy black bean with a yellow germ.

85202. No. 2608. Station No. B–37. A medium-sized oval slightly flattened glossy black bean with a yellow germ.

85203. No. 2609. Station No. B–38. A medium-small oval slightly flattened, dull-black bean with a yellow germ.

85204. No. 2610. Station No. B–39. A medium-large nearly round shiny black bean with a yellow germ.

85205. No. 2611. Station No. B–40. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85206. No. 2612. Station No. B–41. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85207. No. 2613. Station No. B–42. A medium-sized, oval, glossy black bean with the testa slightly split and the germ yellow.

85208. No. 2614. Station No. B–43. A medium-small, oval, slightly flattened, glossy black bean with a yellow germ.

85209. No. 2615. Station No. B–44. A medium-small, oval, slightly flattened, dull-black bean with a yellow germ.

85210. No. 2616. Station No. B–45. A medium-sized oval glossy black bean with a yellow germ.

85211. No. 2617. Station No. B–46. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85212. No. 2618. Station No. B–47. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85053 to 85673—Continued.

85213. No. 2619. Station No. B–48. A medium-large, oval, slightly flattened, glossy black bean with a yellow germ.

85214. No. 2620. Station No. B–49. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85215. No. 2621. Station No. B–51. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85216. No. 2622. Station No. B–52. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85217. No. 2623. Station No. B–53. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85218. No. 2624. Station No. B–24. A medium-sized oval dull-black bean with a yellow germ.

85219. No. 2625. Station No. B–55. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85220. No. 2626. Station No. B–56. A medium-sized, oval, slightly flattened, dull-black bean with a yellow hilum.

85221. No. 2627. Station No. B–57. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85222. No. 2628. Station No. B–58. A large oval dull-black bean with the testa slightly split and the germ yellow.

85223. No. 2629. Station No. B–59. A medium-sized oval dull-black bean with a yellow germ and brown markings about the hilum.

85224. No. 2630. Station No. B–60. A medium-sized oval glossy black bean with a yellow germ.

85225. No. 2631. Station No. B–61. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85226. No. 2632. Station No. B–62. A medium-sized, oval slightly flattened, shiny black bean with a yellow germ.

85227. No. 2633. Station No. B–63. Medium-sized oval glossy black beans with yellow germs, and the testa split on a few of the beans.

85228. No. 2634. Station No. B–64. A medium-sized, oval slightly flattened, dull-black bean with a yellow germ.

85229. No. 2635. Station No. B–65. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85230. No. 2636. Station No. B–66. A medium-small, oval, slightly flattened, glossy black bean with a yellow germ.

85231. No. 2637. Station No. B–67. A medium-small oval black bean with a yellow germ.

85053 to 85673—Continued.

85232. No. 2638. Station No. B–68. A small, nearly round black bean with a yellow germ. It may be of value for sprouts.

85233. No. 2639. Station No. B–69. A small round black bean with a yellow germ; may be of value for sprouts.

85234. No. 2640. Station No. B–70. A small round black bean with a yellow germ; may be of value for sprouts.

85235. No. 2641. Station No. B–72. A small oval glossy black bean with a yellow germ.

85236. No. 2642. Station No. B–73. A small, nearly round, glossy black bean with a yellow germ.

85237. No. 2643. Station No. B–74. A medium-small, much flattened, glossy black bean with a yellow germ.

85238. No. 2644. Station No. B–75. A small, oval, slightly flattened, glossy black bean with a yellow germ.

85239. No. 2645. Station No. B–76. A medium-small, oval, much-flattened, glossy black bean with a yellow germ.

85240. No. 2646. Station No. B–77. A small oval glossy black bean with a yellow germ.

85241. No. 2647. Station No. B–78. A small, nearly round, dull-black bean with a yellow germ.

85242. No. 2648. Station No. B–79. A very small oval glossy black bean with a yellow germ.

85243. No. 2649. Station No. B–80. A very small, nearly round, glossy black bean with a yellow germ; may be of value for sprouts.

85244. No. 2650. Station No. B–81. A small oval dull-black bean with a yellow germ.

85245. No. 2651. Station No. B–82. A medium-small, nearly round, glossy black bean with a yellow germ.

85246. No. 2652. Station No. B–83. A small, nearly round, glossy black bean with a yellow germ.

85247. No. 2653. Station No. B–84. A medium-small, oval, much-flattened, shiny black bean with a yellow germ.

85248. No. 2654. Station No. B–85. A medium-sized, oval, slightly flattened, glossy black bean with a yellow germ.

85249. No. 2655. Station No. B–86. A medium-small, oblong, much-flattened, shiny black bean with a yellow germ.

85250. No. 2656. Station No. B–87. A medium-small, oblong, much-flattened, glossy black bean with a yellow germ.

85251. No. 2657. Station No. B–88. A small round glossy black bean with a yellow germ; may be of value for sprouts.

85053 to 85673—Continued.

85252. No. 2658. Station No. B–89. A medium-sized, oval, slightly flattened, glossy black bean with brown markings about the hilum and a yellow germ.

85253. No. 2659. Station No. B–90. A small oval glossy black bean with a yellow germ.

85254. No. 2660. Station No. B–91. A medium-sized, oval, slightly flattened, dull-black bean with a yellow germ.

85255. No. 2661. Station No. B–92. A medium-sized, oval, much flattened, glossy black bean with a yellow germ.

85256. No. 2662. Station No. B–93. A medium-small oval shiny black bean with a yellow germ. Very similar to the Ebony variety (No. 17254).

85257. No. 2663. Station No. B–94. A medium-small, oval to nearly round, glossy black bean with a yellow germ.

85258. No. 2664. Station No. B–95. A medium-small oval glossy black bean with a yellow germ.

85259. No. 2665. Station No. B–96. A medium-small oval dull-black bean with a yellow germ.

85260. No. 2666. Station No. B–97. A small oval glossy black bean with a yellow germ; may be of value for sprouts.

85261. No. 2667. Station No. B–98. A medium-small oval dull-black bean with a yellow germ.

85262. No. 2668. Station No. B–99. A very small oval glossy black bean with a yellow germ; may be of value for sprouts.

85263. No. 2669. Station No. B–100. A medium-large oval dull-black bean with the testa slightly split and the germ yellow.

85264. No. 2670. Station No. B–101. A medium-large oval glossy black bean with the testa on most of the seeds split on the sides into a fine network; germ yellow.

85265. No. 2671. Station No. B–102. A medium-large, oval, slightly flattened, glossy black bean with a yellow germ.

85266. No. 2672. Station No. B–103. Large oval black beans with brown markings; testa split more or less; germ green.

85267. No. 2673. Station No. B–104. A medium-sized, oval, slightly flattened, glossy black bean with the testa slightly split and the germ yellow.

85268. No. 2674. Station No. B–105. A medium-large oval glossy black bean with the testa slightly split on the sides and the germ yellow.

85269. No. 2675. Station No. B–106. A medium-sized, oval, glossy black, slightly flattened bean with a yellow germ.

85053 to 85673—Continued.

85270. No. 2676. Station No. B–107. Medium-sized, oval, slightly flattened, glossy black beans, some of which have the testa slightly split; germ yellow.

85271. No. 2677. Station No. B–108. A medium-sized oval glossy black bean; germ yellow.

85272. No. 2678. Station No. B–109. A medium-sized, oval, glossy black, slightly flattened bean with a yellow germ.

85273. No. 2679. Station No. B–110. A medium-large oval glossy black bean with a yellow germ.

85274. No. 2680. Station No. B–111. A medium-large oval glossy black bean with a yellow germ and brown markings about the hilum.

85275. No. 2681. Station No. B–112. A medium-sized oval glossy black bean with a yellow germ.

85276. No. 2682. Station No. B–113. A large oval dull-black bean with a yellow germ and the testa slightly split.

85277. No. 2683. Station No. B–114. A medium-sized oval glossy black bean with a yellow germ and the testa split on sides into a fine network.

85278. No. 2684. Station No. B–115. Large oval shiny black beans with brown markings and the testa split more or less; germ yellow.

85279. No. 2685. Station No. B–116. A large, oval, slightly flattened, glossy black bean with the testa split on the sides into a fine network; germ yellow.

85280. No. 2686. Station No. B–117. A medium-sized oval dull-black bean with the testa split on the sides into a fine network; germ yellow.

85281. No. 2687. Station No. B–118. A medium-sized, oval, slightly flattened, glossy black bean with the testa split on the sides into a fine network; germ yellow.

85282. No. 2688. Station No. B–119. A medium-sized, oval, slightly flattened, glossy black bean with the testa split on the sides into a fine network; germ yellow.

85283. No. 2689. Station No. B–120. A medium-sized, oval, slightly flattened, glossy black bean with the testa split on the sides into a fine network; germ yellow.

85284. No. 2690. Station No. B–121. A medium-large oval dull black bean with brown markings; testa split on the sides into a coarse network; germ yellow.

85285. No. 2691. Station No. B–122. A medium-sized, oval, slightly flattened, dull-black bean; testa split on the sides into a fine network; germ yellow.

85286. No. 2692. Station No. B–124. A medium-sized oval dull-black bean; testa split on the sides into a fine network; germ yellow.

85053 to 85673—Continued.

85287. No. 2693. Station No. B–125. A medium-large, oval, slightly flattened, dull-black bean with the testa split into a fine network and the germ yellow.

85288. No. 2694. Station No. B–126. A medium-sized, oval, slightly flattened, dull-black bean; testa split on the sides into a fine network; germ yellow.

85289. No. 2695. Station No. B–127. A medium-sized, oval, slightly flattened, dull-black bean with the testa split into a fine network; germ yellow.

85290. No. 2696. Station No. B–128. A medium-sized, oblong, slightly flattened, dull-black bean with the testa split into a fine network; germ yellow.

85291. No. 2697. Station No. B–129. A medium-sized, nearly round, dull black bean with the testa split on the sides into a coarse network; germ yellow.

85292. No. 2698. Station No. B–130. A medium-large oblong dull-black bean with the testa split on the sides into a fine network; germ yellow.

85293. No. 2699. Station No. B–131. A medium-large oval slightly flattened, glossy black bean with the testa split on the sides into a fine network; germ yellow.

85294. No. 2700. Station No. B–132. A medium-sized oval dull-black bean with a yellow germ.

85295. No. 2701. Station No. B–133. A medium-large, oval, slightly flattened, glossy black bean; testa split on the sides into a fine network; germ yellow.

85296. No. 2702. Station No. B–134. A medium-large, oval, slightly flattened, glossy black bean; testa split on the sides into a fine network; germ yellow.

85297. No. 2703. Station No. B–135. A medium-sized, oval, slightly flattened, glossy black bean; testa split on the sides into a fine network; germ green.

85298. No. 2704. Station No. B–136. A large, oval, slightly flattened, dull-black bean; testa split on the sides into a fine network; germ yellow.

85299. No. 2705. Station No. B–137. A medium-sized, oval, slightly flattened, dull-black bean; testa split into a fine network; germ yellow.

85300. No. 2706. Station No. B–138. A medium-sized, oval, slightly flattened, shiny black bean; testa split on the sides into a fine network; germ yellow.

85301. No. 2707. Station No. B–139. Medium-sized oval glossy black beans with the testa more or less split and the germ yellow.

85302. No. 2708. Station No. B–140. A medium-sized, oval, slightly flattened, shiny black bean; testa split on the sides into a fine network; germ yellow.

85053 to 85673—Continued.

85303. No. 2709. Station No. B–141. A very large, oval, slightly flattened, dull-black bean; testa split on the sides into a fine network; germ yellow.

85304. No. 2710. Station No. B–142. A medium-sized, oval, slightly flattened, glossy black bean; testa split on the sides into a fine network; germ yellow.

85305. No. 2711. Station No. B–143. A medium-sized, oval, slightly flattened, dull-black bean; testa split on the sides into a fine network; germ yellow.

85306. No. 2712. Station No. B–144. A very large, oval, slightly flattened, dull-black bean; testa split on the sides into a fine network; germ green.

85307. No. 2713. Station No. B–145. A large, oblong, slightly flattened, glossy black bean; testa split on the sides into a fine network; germ yellow.

85308. No. 2714. Station No. B–146. A medium-large, oval, slightly flattened, glossy black bean; testa split on the sides into a rather coarse network; germ yellow.

85309. No. 2715. Station No. B–147. Medium-large oval black beans with the testa split on the sides into a network; germ yellow.

85310. No. 2716. Station No. B–148. A medium-sized, oval, slightly flattened, black bean; testa split into a fine network; germ yellow.

85311. No. 2717. Station No. B–149. A medium-sized oval black bean with the testa split into a fine network; germ yellow.

85312. No. 2718. Station No. B–150. A medium-large, oval, slightly flattened, glossy black bean; testa split into a fine network; germ yellow.

85313. No. 2719. Station No. B–151. A medium-sized, oval, slightly flattened, black bean with the testa on the sides split into a fine network.

85314. No. 2720. Station No. Y–1. A medium-sized, oval, much-flattened, cloudy, dull-greenish yellow bean, much mottled with black and brown; hilum black.

85315. No. 2721. Station No. Y–2. A medium-sized, oval, slightly flattened, glossy greenish yellow bean heavily mottled with black; hilum black.

85316. No. 2722. Station No. Y–3. A medium-small, nearly round, slightly cloudy, glossy yellow bean, somewhat mottled with black and brown; hilum black.

85317. No. 2723. Station No. Y–4. A medium-small yellow bean, slightly mottled with black; hilum black.

85318. No. 2724. Station No. Y–5. A very small, round, slightly cloudy, glossy yellow bean with black hilum; may be of value for sprouting.

85053 to 85673—Continued.

85319. No. 2725. Station No. Y–6. A very small, nearly round, slightly cloudy, glossy yellow bean, slightly mottled with brown; hilum black. It should be an excellent variety for sprouting.

85320. No. 2726. Station No. Y–7. A very small, round, slightly cloudy, glossy yellow bean, very slightly mottled with black; hilum black.

85321. No. 2727. Station No. Y–8. A small, round, slightly cloudy, glossy yellow bean, mottled with black; hilum black.

85322. No. 2728. Station No. Y–9. A very small, round, black, cloudy, glossy yellow bean, slightly mottled with black; hilum black; should be of value for sprouting.

85323. No. 2729. Station No. Y–10. A small, round, cloudy, black glossy yellow bean, mottled with black; hilum black; should be of value for sprouts.

85324. No. 2730. Station No. Y–11. A very small, nearly round, slightly cloudy, black, glossy yellow bean with a black hilum; may be of value for sprouting.

85325. No. 2731. Station No. Y–12. A small, nearly round, black cloudy, glossy yellow bean mottled with black; hilum black; should be of value for sprouts.

85326. No. 2732. Station No. Y–13. A small, round, slightly black cloudy, glossy yellow bean, slightly mottled with black; hilum black.

85327. No. 2733. Station No. Y–14. A small round yellow bean, slightly mottled with black; hilum black; may be of value for sprouting.

85328. No. 2734. Station No. Y–15. A medium-small, oval, dull, cloudy black, yellow bean, mottled with brown and black; hilum black.

85329. No. 2735. Station No. Y–16. A very small round yellow bean, much mottled with black; hilum black; should be an excellent variety for sprouting.

85330. No. 2736. Station No. Y–17. A very small, nearly round, glossy yellow bean, much mottled with black; hilum black; should be of value for sprouting.

85331. No. 2737. Station No. Y–18. A large oval glossy yellow bean, mottled with black; hilum black.

85332. No. 2738. Station No. Y–19. A medium-large, oval, slightly flattened, glossy yellow bean with a black hilum.

85333. No. 2739. Station No. Y–20. A medium-large glossy yellow bean with large black hilum.

85334. No. 2740. Station No. Y–21. A medium-sized, oval, slightly flattened, glossy yellow bean with long, large, black hilum.

85335. No. 2741. Station No. Y–22. A medium-sized oval glossy yellow bean, slightly mottled with black; hilum large and black.

85053 to 85673—Continued.

85336. No. 2742. Station No. Y–23. A large, oval, slightly flattened yellow bean with a large black hilum.

85337. No. 2743. Station No. Y–24. A medium-sized oval yellow bean, heavily mottled with black; hilum black.

85338. No. 2744. Station No. Y–25. A medium-small round yellow bean, mottled with black; hilum black; should be of value for sprouting.

85339. No. 2745. Station No. Y–26. A medium-sized oval, slightly flattened, glossy yellow bean with long, black hilum.

85340. No. 2746. Station No. Y–27. A medium-small, oval, slightly flattened, glossy yellow bean, mottled with black; hilum black.

85341. No. 2747. Station No. Y–28. A medium-sized round yellow bean, mottled with dark brown; hilum dark brown.

85342. No. 2748. Station No. Y–30. A large oval yellow bean, mottled with brown; testa wrinkled and split; hilum black.

85343. No. 2749. Station No. Y–31. A medium-large oval glossy light-yellow bean with slate-black hilum.

85344. No. 2750. Station No. Y–32. A medium-sized oval yellow bean, slightly mottled with black; hilum long, large, and black.

85345. No. 2751. Station No. Y–34. A small, nearly round, yellow bean, mottled with black and brown; hilum black; may be of value for sprouting.

85346. No. 2752. Station No. Y–35. A small round yellow bean with black hilum; should be of value for sprouts.

85347. No. 2753. Station No. Y–36. A medium-sized oval yellow bean, slightly clouded with brown; hilum brown.

85348. No. 2754. Station No. Y–38. A medium-large oval cloudy yellow bean, slightly mottled with brown; hilum slate black.

85349. No. 2755. Station No. Y–39. A medium-sized oval yellow bean, heavily mottled with brown and black; hilum slate black.

85350. No. 2756. Station No. Y–41. A large oval glossy light yellow bean, slightly mottled with black; hilum slate black.

85351. No. 2757. Station No. Y–43. A medium-large oval glossy yellow bean with slate-black hilum.

85352. No. 2758. Station No. Y–44. An extra-large oval glossy yellow bean, very slightly mottled with brown; hilum slate black.

85353. No. 2759. Station No. Y–45. A medium-sized oval yellow bean, heavily mottled with brown; hilum slate black.

85053 to 85673—Continued.

85354. No. 2760. Station No. Y–46. A large oval glossy yellow bean with pale slate-black hilum.

85355. No. 2761. Station No. Y–47. A large, nearly round yellow bean with black hilum.

85356. No. 2762. Station No. Y–48. Large oval light-yellow beans with the testa more or less wrinkled and split; hilum slate black, tinged with brown about the edges.

85357. No. 2763. Station No. Y–49. A medium-sized oval glossy light yellow bean; hilum light slate black.

85358. No. 2764. Station No. Y–51. A medium-sized oval yellow bean, slightly mottled with brown; hilum light brown.

85359. No. 2765. Station No. Y–53. A medium-sized oval glossy yellow bean, clouded with brown; hilum long, large, and dark brown.

85360. No. 2766. Station No. Y–54. A medium-sized, oval, slightly flattened yellow bean, heavily mottled with brown; hilum dark brown.

85361. No. 2767. Station No. Y–55. A large oval glossy yellow bean, slightly mottled with brown; hilum very dark brown.

85362. No. 2768. Station No. Y–56. A medium-large oval glossy yellow bean, slightly mottled with brown; hilum dark brown.

85363. No. 2769. Station No. Y–57. A medium-large, oval, slightly flattened yellow bean with long, very dark-brown hilum.

85364. No. 2770. Station No. Y–58. A medium-small, oval, slightly flattened, glossy yellow bean, heavily mottled with brown; hilum dark brown.

85365. No. 2771. Station No. Y–59. A medium-small, oval, slightly flattened, glossy brown bean, heavily mottled with brown; hilum dark brown.

85366. No. 2772. Station No. Y–63. A medium-large, oval, slightly flattened yellow bean, heavily mottled with dark brown; hilum long, large, and dark brown.

85367. No. 2773. Station No. Y–65. A medium-sized oval glossy yellow bean, heavily mottled with brown; hilum dark brown.

85368. No. 2774. Station No. Y–67. Medium-sized oval to nearly round yellow beans, heavily mottled with dark brown; hilums dark brown.

85369. No. 2775. Station No. Y–68. A medium-sized, oval, slightly flattened light-yellow bean, heavily mottled with dark brown; hilum dark brown.

85370. No. 2776. Station No. Y–69. A medium-large oval yellow bean, mottled with dark brown; hilum long, large, and very dark brown.

85053 to 85673—Continued.

85371. No. 2777. Station No. Y–71. A medium-sized oval yellow bean, heavily mottled with brown; hilum brown.

85372. No. 2778. Station No. Y–72. A medium-small oval yellow bean, heavily mottled with brown; hilum dark brown.

85373. No. 2779. Station No. Y–73. A medium-sized oval yellow bean, much mottled with brown; hilum brown.

85374. No. 2780. Station No. Y–74. A medium-large oval slightly flattened glossy yellow bean, much mottled with brown; hilum dark brown.

85375. No. 2781. Station No. Y–75. A medium-small oval slightly flattened, glossy yellow bean, much mottled with brown; hilum dark brown.

85376. No. 2782. Station No. Y–76. A medium-sized oval glossy yellow bean with long large dark-brown hilum.

85377. No. 2783. Station No. Y–77. A medium-small oval yellow bean, slightly mottled with brown; hilum dark brown.

85378. No. 2784. Station No. Y–79. A small oval yellow bean, much mottled with brown; hilum brown.

85379. No. 2785. Station No. Y–80. A very small round glossy yellow bean, slightly mottled with brown; hilum dark brown; should be of value for sprouting.

85380. No. 2786. Station No. Y–81. A very small round glossy yellow bean, mottled with brown; hilum dark brown; should be of value for sprouting.

85381. No. 2787. Station No. Y–82. A medium-sized oval yellow bean, mottled with brown; hilum dark brown.

85382. No. 2788. Station No. Y–83. A medium-small oval slightly flattened yellow bean, much mottled with brown; hilum large and brown.

85383. No. 2789. Station No. Y–85. A medium-large oval light-yellow bean, much mottled with brown; hilum brown.

85384. No. 2790. Station No. Y–87. A large oval slightly flattened light-yellow bean, mottled with brown; hilum long, large, and brown.

85385. No. 2791. Station No. Y–89. A medium-large oval light-yellow bean, much mottled with brown; hilum brown.

85386. No. 2792. Station No. Y–90. Medium-sized oval slightly flattened, light yellow beans, mottled with brown; hilums vary from light to dark brown.

85387. No. 2793. Station No. Y–91. A medium-small oval slightly flattened yellow bean, slightly mottled with brown; hilum large, brown.

85053 to 85673—Continued.

85388. No. 2794. Station No. Y–92. A medium-small oval light-yellow bean, much mottled with brown; hilum brown.

85389. No. 2795. Station No. Y–93. A medium-sized oval yellow bean, mottled with brown; hilum brown.

85390. No. 2796. Station No. Y–95. A medium-sized oval glossy yellow bean with a rather large, brown hilum.

85391. No. 2797. Station No. Y–97. A large oval glossy yellow bean with a pale hilum.

85392. No. 2798. Station No. Y–98. A medium-sized oval yellow bean, much mottled with brown; testa split on each side of the brown hilum.

85393. No. 2799. Station No. Y–99. A medium-sized oval dull-yellow bean, much mottled with brown; hilum dark brown.

85394. No. 2800. Station No. Y–100. A medium-sized oval light-yellow bean, mottled with brown; hilum brown.

85395. No. 2801. Station No. Y–101. A medium-sized oval yellow bean, slightly mottled with brown; hilum brown.

85396. No. 2802. Station No. Y–102. A medium-sized oval slightly flattened yellow bean, much mottled with brown; hilum brown.

85397. No. 2803. Station No. Y–103. A medium-sized oval glossy light-brown bean, mottled with brown; hilum russet brown.

85398. No. 2804. Station No. Y–104. A small oval glossy yellow bean, mottled with brown; hilum brown.

85399. No. 2805. Station No. Y–105. Medium-large oval light yellow beans, slightly mottled with brown; testa split more or less about the brown hilum.

85400. No. 2806. Station No. Y–106. A small oval slightly flattened yellow bean with dark-brown hilum.

85401. No. 2807. Station No. Y–107. A medium-small oval glossy yellow bean, slightly mottled with brown; hilum brown.

85402. No. 2808. Station No. Y–108. A medium-small oval yellow bean, slightly mottled with brown; hilum dark brown.

85403. No. 2809. Station No. Y–109. A medium-small oval yellow bean, mottled with brown; hilum dark brown.

85404. No. 2810. Station No. Y–110. A medium-sized oval slightly flattened straw-yellow bean, slightly mottled with brown; hilum dark brown; testa slightly split.

85405. No. 2811. Station No. Y–111. A medium-sized oval yellow bean, mottled with dark brown; hilum rather large, long, and dark brown.

85053 to 85673—Continued.

85406. No. 2812. Station No. Y–112. A very small, nearly round, glossy yellow bean, mottled with brown; hilum dark brown; should be of value for sprouts.

85407. No. 2813. Station No. Y–114. A medium-small oval light-yellow bean with brown hilum.

85408. No. 2814. Station No. Y–115. A medium-large oval light-yellow bean, slightly mottled with brown; hilum long, large, and brown.

85409. No. 2815. Station No. Y–116. A medium-sized, oval, slightly flattened yellow bean, mottled with dark brown; hilum dark brown.

85410. No. 2816. Station No. Y–117. A medium-sized, oval, slightly flattened yellow bean with brown hilum.

85411. No. 2817. Station No. Y–118. A medium-sized oval light yellow bean, slightly mottled with brown; hilum brown.

85412. No. 2818. Station No. Y–119. A medium-small, oval, slightly flattened yellow bean, much mottled with dark brown; hilum dark brown.

85413. No. 2819. Station No. Y–121. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum long, large, and brown.

85414. No. 2820. Station No. Y–122. A medium-sized oval yellow bean with russet-brown hilum.

85415. No. 2821. Station No. Y–126. A medium-large, nearly round, glossy yellow bean with brown hilum.

85416. No. 2822. Station No. Y–127. A medium-sized, nearly round, glossy yellow bean with brown hilum.

85417. No. 2823. Station No. Y–128. Large yellow oval beans with the testa more or less split; hilum brown.

85418. No. 2824. Station No. Y–131. A medium-small oval glossy yellow bean with pale hilum.

85419. No. 2825. Station No. Y–132. Large oval light-yellow beans, mottled with brown and having the testa more or less split; hilum pale.

85420. No. 2826. Station No. Y–136. A medium-sized oval yellow bean, much mottled with brown; hilum pale.

85421. No. 2827. Station No. Y–138. A medium-large oval dull-yellow bean, much mottled with brown; hilum brown.

85422. No. 2828. Station No. Y–139. A medium-small, nearly round yellow bean, slightly mottled with brown; hilum dark brown.

85423. No. 2829. Station No. Y–140. A small oval glossy yellow bean, much mottled with brown; hilum dark brown.

85053 to 85673—Continued.

85424. No. 2830. Station No. Y–141. A medium-sized oval glossy yellow bean, mottled with brown; hilum brown.

85425. No. 2831. Station No. Y–142. A medium-sized, nearly round glossy yellow bean, slightly mottled with brown; hilum light brown.

85426. No. 2832. Station No. Y–143. A medium-small, nearly round yellow bean, much mottled with dark brown; hilum dark brown.

85427. No. 2833. Station No. Y–145. A very small round dull-yellow bean with light-brown hilum; excellent for sprouting.

85428. No. 2834. Station No. Y–147. A medium-large, oval, slightly flattened yellow bean with brown hilum.

85429. No. 2835. Station No. Y–153. A medium-large oval glossy yellow bean with long brown hilum.

85430. No. 2836. Station No. Y–154. A medium-sized oval light-yellow bean, slightly mottled with brown; hilum russet brown.

85431. No. 2837. Station No. Y–161. A medium-sized, oval, much-flattened, light-yellow bean, mottled with brown; hilum brown.

85432. No. 2838. Station No. Y–162. Medium-sized oval glossy yellow beans, mottled with brown; hilums vary from light to dark brown.

85433. No. 2839. Station No. Y–165. A medium-sized oval yellow bean, very slightly mottled with brown; hilum brown.

85434. No. 2840. Station No. Y–167. A medium-sized oval light-yellow bean, slightly mottled with brown; hilum brown.

85435. No. 2841. Station No. Y–168. A medium-sized, oval, slightly flattened, light-yellow bean, slightly mottled, with brown; hilum russet brown.

85436. No. 2842. Station No. Y–169. A medium-large oval glossy yellow bean, mottled with brown; hilum brown.

85437. No. 2843. Station No. Y–171. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum pale.

85438. No. 2844. Station No. Y–172. A medium-sized, oval, slightly flattened yellow bean with a long brown hilum.

85439. No. 2845. Station No. Y–173. A medium-sized, oval, slightly flattened, glossy yellow bean, mottled with brown; hilum pale.

85440. No. 2846. Station No. Y–175. A medium-sized, oval, slightly flattened, light-yellow bean with a long brown hilum.

85441. No. 2847. Station No. Y–176. A medium-sized oval yellow bean with a russet-brown hilum.

85053 to 85673—Continued.

85442. No. 2848. Station No. Y–178. A medium-sized oval light-yellow bean, slightly mottled with a purple spot; hilum brown.

85443. No. 2849. Station No. Y–179. A medium-sized oval yellow bean with a long brown hilum.

85444. No. 2850. Station No. Y–181. A medium-small oval glossy yellow bean, slightly mottled with brown; hilum brown.

85445. No. 2851. Station No. Y–182. Medium-sized oval yellow beans, slightly mottled with brown and the testa more or less split; hilums brown.

85446. No. 2852. Station No. Y–183. A medium-large, oval, slightly flattened, glossy yellow bean, slightly mottled with brown; hilum brown.

85447. No. 2853. Station No. Y–185. A medium-sized, oval, slightly flattened yellow bean with brown hilum.

85448. No. 2854. Station No. Y–186. A medium-small, oval, glossy yellow bean with brown hilum.

85449. No. 2855. Station No. Y–187. A small, nearly round, greenish yellow bean, slightly mottled with brown; hilum light brown.

85450. No. 2856. Station No. Y–189. A medium-sized oval glossy yellow bean, mottled with brown; hilum light brown.

85451. No. 2857. Station No. Y–191. A medium-sized, oval, slightly flattened, glossy yellow bean, heavily mottled with brown; hilum brown.

85452. No. 2858. Station No. Y–193. A medium-large oval yellow bean with testa slightly split and hilum pale brown.

85453. No. 2859. Station No. Y–195. A medium-sized, oval, slightly flattened yellow bean with pale hilum.

85454. No. 2860. Station No. Y–197. Medium-sized oval glossy yellow beans, slightly mottled with brown; hilums vary from pale to dark brown.

85455. No. 2861. Station No. Y–202. A medium-small, oval, slightly flattened, dull-yellow bean, much mottled with brown; hilum brown.

85456. No. 2862. Station No. Y–203. Medium-sized oval glossy yellow beans, mottled with brown; hilums pale to brown.

85457. No. 2863. Station No. Y–207. A medium-large, oval, slightly flattened, glossy yellow bean with a long brown hilum.

85458. No. 2864. Station No. Y–208. A medium-sized oval glossy yellow bean with a dark-brown hilum and testa slightly wrinkled.

85459. No. 2865. Station No. Y–209. A medium-sized oval light-yellow bean, slightly mottled with brown; hilum russet brown.

85460. No. 2866. Station No. Y–212. A medium-sized oval light-yellow bean with a brown hilum.

85053 to 85673—Continued.

85461. No. 2867. Station No. Y–213. A medium-sized, nearly round yellow bean, slightly mottled with brown; hilum long and brown.

85462. No. 2868. Station No. Y–215. A medium-small, oval, much-flattened yellow bean, heavily mottled with brown; hilum long and brown.

85463. No. 2869. Station No. Y–216. A very small round glossy yellow bean with a brown hilum; excellent variety for sprouts.

85464. No. 2870. Station No. Y–217. A medium-small, oval, slightly flattened yellow bean, much mottled with brown; hilum brown.

85465. No. 2871. Station No. Y–218. A small, oval, much flattened, glossy yellow bean, heavily mottled with brown; hilum brown.

85466. No. 2872. Station No. Y–219. A small oval light-yellow bean with russet-brown hilum; should be of value for sprouts.

85467. No. 2873. Station No. Y–221. A medium-small oval light-yellow bean with russet brown hilum.

85468. No. 2874. Station No. Y–224. A medium-sized oval light-yellow bean, mottled with brown; hilum russet brown.

85469. No. 2875. Station No. Y–227. A medium-sized oval light-yellow bean, slightly mottled with brown; hilum light brown.

85470. No. 2876. Station No. Y–231. A medium-sized oval glossy yellow bean, mottled with brown; hilum brown.

85471. No. 2877. Station No. Y–233. A medium-sized oval dull-yellow bean, slightly mottled with brown; hilum brown.

85472. No. 2878. Station No. Y–233. A medium-sized, oval, slightly flattened yellow bean, mottled with brown; hilum dark brown.

85473. No. 2879. Station No. Y–238. A medium-sized, nearly round yellow bean, slightly spotted with brown; hilum brown.

85474. No. 2880. Station No. Y–240. A medium-small, oval, slightly flattened, light glossy yellow bean with russet brown hilum.

85475. No. 2881. Station No. Y–243. A medium-sized, oval, slightly mottled yellow bean with pale hilum.

85476. No. 2882. Station No. Y–244. A medium-small oval yellow bean with brown hilum.

85477. No. 2883. Station No. Y–247. A medium-small, nearly round, light-yellow bean, slightly mottled with brown; hilum brown.

85478. No. 2884. Station No. Y–248. A medium-sized oval glossy yellow bean with brown hilum.

85479. No. 2885. Station No. Y–249. A medium-small oval glossy yellow bean with a brown hilum.

85053 to 85673—Continued.

85480. No. 2886. Station No. Y–250. A medium-small oval yellow bean with brown hilum.

85481. No. 2887. Station No. Y–251. A medium-small, oval, slightly flattened yellow bean with brown hilum.

85482. No. 2888. Station No. Y–255. A medium-small oval yellow bean, slightly mottled with brown; hilum brown.

85483. No. 2889. Station No. Y–256. A medium-small oval glossy yellow bean with brown hilum.

85484. No. 2090. Station No. Y–257. A medium-sized, oval, slightly flattened yellow bean, mottled with brown; hilum russet brown.

85485. No. 2891. Station No. Y–260. A medium-sized, oval, much-flattened, light-yellow bean with a brown hilum.

85486. No. 2892. Station No. Y–262. A medium-small, nearly round yellow bean, slightly mottled with brown; hilum brown.

85487. No. 2893. Station No. Y–264. A medium-sized oval light-yellow bean, mottled with brown; hilum brown.

85488. No. 2894. Station No. Y–265. A medium-sized, oval, slightly flattened, glossy yellow bean with a russet-brown hilum.

85489. No. 2895. Station No. Y–267. A medium-sized, oval, slightly flattened, light-yellow bean, much mottled with brown; hilum light brown.

85490. No. 2896. Station No. Y–269. A medium-small oval glossy yellow bean, mottled with brown; hilum brown.

85491. No. 2897. Station No. Y–271. A medium-small oval light-yellow bean, very slightly mottled with brown; hilum light brown.

85492. No. 2898. Station No. Y–272. A medium-small oval light-yellow bean, slightly mottled with brown; hilum brown.

85493. No. 2899. Station No. Y–273. A medium-sized oval glossy light-yellow bean with a pale hilum.

85494. No. 2900. Station No. Y–274. A medium-sized oval light-yellow bean with a brown hilum.

85495. No. 2901. Station No. Y–275. A medium-small, oval, slightly flattened yellow bean, slightly mottled with brown; hilum brown.

85496. No. 2902. Station No. Y–276. A medium-small, oval, slightly flattened yellow bean, mottled with brown; hilum brown.

85497. No. 2903. Station No. Y–278. A medium-small oval yellow bean, mottled with brown; hilum pale.

85498. No. 2904. Station No. Y–280. A medium-sized oval yellow bean with a light-brown hilum.

85499. No. 2905. Station No. Y–281. A medium-sized oval yellow bean, much mottled with brown; hilum brown.

85053 to 85673—Continued.

85500. No. 2906. Station No. Y–282. A medium-small oval light-yellow bean with a brown hilum.

85501. No. 2907. Station No. Y–283. A medium-small oval light-yellow bean, mottled with brown; hilum pale.

85502. No. 2908. Station No. Y–286. A medium-sized oval light-yellow bean with a brown hilum.

85503. No. 2909. Station No. Y–287. A medium-small round glossy yellow bean with a brown hilum; may be of value for sprouts.

85504. No. 2910. Station No. Y–288. A medium-sized, oval, slightly flattened yellow bean, much mottled with brown; hilum light brown.

85505. No. 2911. Station No. Y–290. A very small round yellow bean, much mottled with brown; hilum brown. This is the smallest seeded variety we have ever seen; some of the seeds are as small as mung beans; should be an excellent variety for sprouts.

85506. No. 2912. Station No. Y–291. A medium-sized oval glossy yellow bean, mottled with brown; hilum pale.

85507. No. 2913. Station No. Y–295. A medium-sized, nearly round, glossy yellow bean, slightly mottled with brown; hilum light brown.

85508. No. 2914. Station No. Y–297. A medium-sized oval glossy yellow bean, mottled with brown; hilum light brown.

85509. No. 2915. Station No. Y–298. A large oval yellow bean with pale-brown hilum and the testa much split.

85510. No. 2916. Station No. Y–300. A medium-sized oval yellow bean, slightly mottled with brown; hilum pale.

85511. No. 2917. Station No. Y–301. A medium-sized oval, glossy yellow bean, slightly mottled with yellow; hilum light brown.

85512. No. 2918. Station No. Y–302. A medium-large oval yellow bean, somewhat mottled with brown; hilum light brown; the testa slightly split.

85513. No. 2919. Station No. Y–303. A medium-large oval yellow bean, slightly mottled with brown; testa somewhat wrinkled and split; hilum brown.

85514. No. 2920. Station No. Y–304. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum pale.

85515. No. 2921. Station No. Y–305. Medium-sized oval light-yellow beans, slightly mottled; hilums vary from pale to brown.

85516. No. 2922. Station No. Y–306. A medium-large oval light-yellow bean, slightly mottled; hilum light brown.

85517. No. 2923. Station No. Y–307. A medium-sized oval yellow bean with pale hilum.

85053 to 85673—Continued.

85518. No. 2924. Station No. Y–308. A medium-sized, oval, slightly flattened, glossy yellow bean with a light-brown hilum.

85519. No. 2925. Station No. Y–309. A medium-sized oval glossy yellow bean, much mottled with brown; hilum light brown.

85520. No. 2926. Station No. Y–310. A medium-sized oval glossy yellow bean, much mottled with brown; hilum pale brown.

85521. No. 2927. Station No. Y–311. A medium-sized oval glossy yellow bean, much mottled with brown; hilum light brown.

85522. No. 2928. Station No. Y–312. A medium-sized, oval, slightly flattened, glossy yellow bean with a brownish black hilum.

85523. No. 2929. Station No. Y–313. A medium-sized oval glossy yellow bean, much mottled with brown; hilum brown.

85524. No. 2930. Station No. Y–314. A medium-sized oval glossy bean, mottled with brown; hilum pale brown.

85525. No. 2931. Station No. Y–315. A medium-small oval glossy yellow bean, slightly mottled with brown; hilum light slate black.

85526. No. 2932. Station No. Y–316. A medium-small oval glossy yellow bean with a pale hilum.

85527. No. 2933. Station No. Y–317. A medium-sized oval glossy light-yellow bean with a pale hilum.

85528. No. 2934. Station No. Y–318. A small oval yellow bean, much mottled with brown; hilum brown.

85529. No. 2935. Station No. Y–319. A medium-sized oval glossy yellow bean slightly mottled with brown; hilum pale.

85530. No. 2936. Station No. Y–320. A large oval yellow bean, slightly mottled with brown; testa much split; hilum brown.

85531. No. 2937. Station No. Y–321. Medium-sized, oval, greenish yellow to yellow, much mottled beans; hilums vary from pale brown to brown.

85532. No. 2938. Station No. Y–322. A medium-sized oval glossy brown bean, much mottled with brown; hilum light brown.

85533. No. 2939. Station No. Y–323. Large oval yellow beans, slightly mottled with brown; testa much split, hilums vary from pale to brown.

85534. No. 2940. Station No. Y–324. A medium-sized oval yellow bean, much mottled with brown; hilum pale.

85535. No. 2941. Station No. Y–325. A medium-sized oval glossy light yellow bean with pale hilum.

85536. No. 2942. Station No. 327. A medium-sized oval glossy yellow bean, mottled with brown; hilum pale.

85053 to 85673—Continued.

85537. No. 2943. Station No. Y–328. A medium-sized oval yellow bean, mottled with brown; hilum brown.

85538. No. 2944. Station No. Y–329. A medium-sized oval yellow bean, slightly mottled with brown; hilum pale.

85539. No. 2945. Station No. Y–330. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum light brown.

85540. No. 2946. Station No. Y–331. A medium-small, oval, much flattened, glossy yellow bean with pale hilum.

85541. No. 2947. Station No. Y–332. Medium-large oval yellow beans, slightly mottled with brown and with the testa more or less wrinkled; hilum brown.

85542. No. 2948. Station No. Y–333. Medium-sized oval glossy yellow beans, much mottled with brown; hilums vary from pale brown to brown.

85543. No. 2949. Station No. Y–334. A medium-small oval light-yellow bean, slightly mottled with brown; hilum pale.

85544. No. 2950. Station No. Y–335. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum pale.

85545. No. 2951. Station No. Y–336. A medium-sized oval glossy yellow bean, much mottled with brown; hilum light brown.

85546. No. 2952. Station No. Y–339. A medium-sized, oval, slightly flattened yellow bean, much mottled with brown; hilum pale.

85547. No. 2953. Station No. Y–340. A medium-sized, oval, slightly flattened, glossy yellow bean, somewhat mottled with brown; hilum pale.

85548. No. 2954. Station No. Y–341. A medium-small oval yellow bean, much mottled with brown; hilum light brown.

85549. No. 2955. Station No. Y–342. A medium-sized oval yellow bean, much mottled with brown; hilum pale.

85550. No. 2956. Station No. Y–343. A medium-small, oval, slightly flattened, glossy yellow bean, somewhat mottled with brown; hilum light brown.

85552. No. 2958. Station No. Y–345. A medium-sized, oval, slightly flattened, glossy yellow bean, somewhat mottled with brown; hilum pale.

85552. No. 2858. Station No. Y–345. A medium-sized, oval, yellow bean, slightly mottled with brown; hilum pale.

85553. No. 2959. Station No. Y–346. A medium-sized oval glossy brown bean, mottled with brown; hilum pale.

85554. No. 2960. Station No. Y–347. A medium-small, oval, slightly flattened, glossy yellow bean with a pale hilum.

85053 to 85673—Continued.

85555. No. 2961. Station No. Y–348. A medium-large oval yellow bean, slightly mottled with brown; hilum light brown.

85556. No. 2962. Station No. Y–349. A medium-sized, oval, slightly flattened yellow bean, mottled with brown; hilum pale.

85557. No. 2963. Station No. Y–350. A medium-sized, oval, slightly flattened yellow bean, somewhat mottled with brown; hilum dark brown.

85558. No. 2964. Station No. Y–351. A large oval light-yellow bean with the testa slightly split; somewhat mottled with brown; hilum light brown.

85559. No. 2965. Station No. Y–352. A medium-sized, oval, slightly flattened, light yellow bean, somewhat mottled with brown; hilum pale.

85560. No. 2966. Station No. 353. Medium-large oval yellow beans, slightly mottled with brown and the testa more or less split; hilum light brown.

85561. No. 2967. Station No. Y–355. A large oval yellow bean, very slightly mottled with brown; hilum light brown; testa slightly split about hilum.

85562. No. 2968. Station No. Y–356. A medium-sized oval glossy yellow bean, mottled with brown; hilum pale brown.

85563. No. 2969. Station No. Y–357. A medium-sized oval light-yellow bean, slightly mottled with brown; hilum very pale brown.

85564. No. 2970. Station No. 359. A medium-sized oval glossy yellow bean with light-brown hilum.

85565. No. 2971. Station No. Y–360. A medium-small, oval, slightly flattened yellow bean, much mottled with brown; hilum pale brown.

85566. No. 2972. Station No. Y–361. Medium-sized oval glossy yellow beans, mottled with brown; hilums pale to dark brown.

85567. No. 2973. Station No. Y–362. A medium-sized oval glossy yellow bean, much mottled with brown; hilum pale.

85568. No. 2974. Station No. 363. A medium-large oval glossy yellow bean, slightly mottled with brown; hilum pale.

85569. No. 2975. Station No. Y–364. A medium-large, oval, slightly flattened yellow bean, somewhat mottled with brown; hilum pale.

85570. No. 2976. Station No. Y–365. A large oval yellow bean, somewhat mottled with brown and with the testa slightly split; hilum light brown.

85571. No. 2977. Station No. Y–366. A large oval yellow bean, slightly mottled with brown; testa much split; hilum pale.

85053 to 85673—Continued.

85572. No. 2978. Station No. Y–367. Large oval yellow beans, slightly mottled with brown; testa more or less split; hilum brown.

85573. No. 2979. Station No. 368. Medium-large oval yellow beans, mottled with brown; testa more or less split; hilum large and pale.

85574. No. 2980. Station No. 369. A medium-large oval yellow bean, slightly mottled with brown; hilum pale.

85575. No. 2981. Station No. Y–370. A medium-sized oval yellow bean with pale hilum.

85576. No. 2982. Station No. Y–371. A medium-large oval glossy yellow bean, much mottled with brown; hilum pale brown.

85577. No. 2983. Station No. Y–373. A medium-sized, oval, slightly flattened, glossy yellow bean with a pale hilum.

85578. No. 2984. Station No. Y–374. Medium-large oval greenish yellow beans, with very slight markings of brown; testa more or less split; hilum pale.

85579. No. 2985. Station No. Y–375. A medium-large oval glossy yellow bean, very slightly mottled with brown; hilum pale.

85580. No. 2986. Station No. Y–376. A medium-sized oval glossy yellow bean, mottled with brown; hilum pale.

85581. No. 2987. Station No. Y–377. A medium-large oval light-yellow bean, mottled with brown; hilum pale brown.

85582. No. 2988. Station No. Y–378. A medium-large oval glossy yellow bean, very slightly mottled with brown; hilum pale.

85583. No. 2989. Station No. Y–379. A medium-large oval yellow bean, mottled with brown; hilum brown.

85584. No. 2990. Station No. Y–380. A medium-sized, oval, slightly flattened yellow bean, somewhat mottled with brown; hilum brown.

85585. No. 2991. Station No. Y–381. A very large oval light-yellow bean, mottled with brown; testa much split and wrinkled; hilum brown.

85586. No. 2992. Station No. Y–382. A medium-large oval greenish yellow bean, slightly mottled with brown; hilum pale brown.

85587. No. 2993. Station No. Y–383. A medium-sized oval slightly flattened yellow bean, mottled with brown; hilum light brown.

85588. No. 2994. Station No. Y–384. A large oval light-yellow bean, very slightly mottled with brown; hilum light brown.

85589. No. 2995. Station No. Y–385. A medium-large oval glossy yellow bean, very slightly mottled with brown; hilum pale brown.

85053 to 85673—Continued.

85590. No. 2996. Station No. 386. A medium-large oval light-yellow bean, mottled with brown; hilum brown.

85591. No. 2997. Station No. Y–387. A medium-sized oval yellow bean, heavily mottled with brown; hilum brown.

85592. No. 2998. Station No. Y–388. A medium-sized, oval, slightly flattened yellow bean, very slightly mottled with brown; hilum light brown.

85593. No. 2999. Station No. Y–389. A medium-sized, oval, cloudy brown yellow bean, mottled with brown; hilum brown.

85594. No. 3000. Station No. Y–390. A medium-sized oval glossy yellow bean, very slightly mottled with brown; hilum pale brown.

85595. No. 3001. Station No. Y–391. A medium-large oval glossy yellow bean, much mottled with brown; hilum brown.

85596. No. 3002. Station No. Y–392. A medium-sized oval glossy yellow bean, much mottled with brown; hilum brown.

85597. No. 3003. Station No. Y–393. A medium-sized oval glossy yellow bean, mottled with brown; testa slightly split; hilum brown.

85598. No. 3004. Station No. Y–394. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum pale.

85599. No. 3005. Station No. Y–395. A medium-sized oval glossy yellow bean, much mottled with brown; hilum pale.

85600. No. 3006. Station No. Y–396. A medium-sized oval glossy yellow bean with a pale hilum.

85601. No. 3007. Station No. Y–397. A medium-sized, nearly round, glossy yellow bean, much mottled with brown; hilum brown.

85602. No. 3008. Station No. Y–400. A medium-sized oval light-brown bean, slightly mottled with brown; hilum brown.

85603. No. 3009. Station No. Y–401. A medium-small oval glossy yellow bean, mottled with brown; hilum brown.

85604. No. 3010. Station No. Y–402. A medium-sized, oval, slightly flattened yellow bean with a pale-brown hilum.

85605. No. 3011. Station No. Y–403. A medium-large oval glossy yellow bean, slightly mottled with brown; hilum light brown.

85606. No. 3012. Station No. Y–404. A medium-sized, oval, slightly flattened, glossy yellow bean, somewhat mottled with brown; hilum pale brown.

85607. No. 3013. Station No. Y–405. A medium-sized, oval, slightly flattened, glossy yellow bean, much mottled with brown; hilum pale brown.

85053 to 85673—Continued.

85608. No. 3014. Station No. Y–406. A medium-sized, oval, slightly flattened, glossy yellow bean, mottled with brown; hilum light brown.

85609. No. 3015. Station No. Y–407. A medium-sized, oval, slightly flattened, glossy yellow bean, much mottled with brown; hilum pale brown.

85610. No. 3016. Station No. Y–408. A medium-small, oval, slightly flattened, glossy yellow bean with a pale hilum.

85611. No. 3017. Station No. Y–409. A medium-small, oval, slightly flattened, light yellow bean, much mottled with brown; hilum brown.

85612. No. 3018. Station No. Y–410. A medium-sized, nearly round, light yellow bean, much mottled with brown; hilum brown.

85613. No. 3019. Station No. Y–411. A medium-small, oval, somewhat flattened, glossy yellow bean, very slightly mottled with brown; hilum brown.

85614. No. 3020. Station No. Y–412. A medium-small, oval, slightly flattened, glossy yellow bean, mottled with brown; hilum light brown.

85615. No. 3021. Station No. Y–413. A medium-small oval yellow bean, mottled with brown; hilum light brown.

85616. No. 3022. Station No. Y–414. A medium-small, oval, slightly flattened, glossy yellow bean with a pale hilum.

85617. No. 3023. Station No. Y–415. A medium-sized oval glossy yellow bean with a pale hilum.

85618. No. 3024. Station No. Y–416. A medium-sized, oval, somewhat flattened, glossy yellow bean, very slightly mottled with brown; hilum pale.

85619. No. 3025. Station No. Y–417. A medium-small, oval, slightly flattened, glossy yellow bean, much mottled with brown; hilum brown.

85620. No. 3026. Station No. Y–418. A medium-sized, oval, somewhat glossy yellow bean, slightly mottled with brown; hilum pale.

85621. No. 3027. Station No. Y–419. A medium-sized oval yellow bean, much mottled with brown; hilum light brown.

85622. No. 3028. Station No. Y–420. A medium-small oval glossy yellow bean with a pale hilum.

85623. No. 3029. Station No. Y–422. A medium-sized oval yellow bean, much mottled with brown; hilum brown.

85624. No. 3030. Station No. Y–423. A medium-sized, oval, slightly flattened, glossy yellow bean with a pale hilum.

85625. No. 3031. Station No. Y–424. A medium-small, oval, somewhat flattened, light-yellow bean, slightly mottled with brown; hilum pale.

85053 to 85673—Continued.

85626. No. 3032. Station No. Y–425. A medium-small oval light-yellow bean, slightly mottled with brown; hilum pale.

85627. No. 3033. Station No. Y–426. A medium-sized oval glossy yellow bean, slightly mottled with brown; hilum pale.

85628. No. 3034. Station No. Y–427. A medium-small, oval, somewhat flattened, glossy yellow bean, slightly mottled with brown; hilum pale.

85629. No. 3035. Station No. Y–428. A medium-sized oval yellow bean, much mottled with brown; hilum brown.

85630. No. 3036. Station No. Y–429. A medium-small, oval, slightly flattened, light-yellow bean with a pale-brown hilum.

85631. No. 3037. Station No. Y–430. Medium-small oval yellow beans, much mottled with brown; hilums vary from pale to brown.

85632. No. 3038. Station No. Y–431. Medium-small, oval, slightly flattened, glossy yellow beans, much mottled with brown; hilums vary from pale to brown.

85633. No. 3039. Station No. Y–432. A medium-large oval glossy yellow bean, mottled with brown; hilum pale.

85634. No. 3040. Station No. Y–434. A medium-large oval light-yellow bean, mottled with dark brown; testa slightly split; hilum dark brown.

85635. No. 3041. Station No. Y–435. A medium-large, oval, slightly flattened yellow bean, much mottled with dark brown; hilum brown.

85636. No. 3042. Station No. Y–436. A medium-small, nearly round, light-yellow bean, much mottled with brown; hilum pale.

85637. No. 3043. Station No. Y–437. A medium-small oval yellow bean, much mottled with brown; hilum brown.

85638. No. 3044. Station No. Y–438. A very large oval light-yellow bean with the testa split into network on the sides; hilum pale brown.

85639. No. 3045. Station No. Y–439. A medium-sized, nearly round, light-yellow bean, much mottled with brown: hilum brown.

85640. No. 3046. Station No. Y–440. A medium-large, oval, slightly flattened, light-yellow bean, much mottled with brown: hilum brown.

85641. No. 3047. Station No. Y–441. A medium-sized, nearly round, glossy yellow bean, much mottled with brown; hilum pale.

85642. No. 3048. Station No. Y–442. A medium-small, nearly round, light-yellow bean, very slightly mottled with brown; hilum pale brown.

85053 to 85673—Continued.

85643. No. 3049. Station No. Y–443. A medium-small oval light-yellow bean, much mottled with brown; hilum light brown.

85644. No. 3050. Station No. Y–444. Large yellow oval beans, slightly mottled with brown; testa somewhat split; hilum light brown.

85645. No. 3051. Station No. Y–445. A medium-small oval yellow bean, much mottled with brown; hilum brown.

85646. No. 3052. Station No. Y–446. A medium-sized oval yellow bean, much mottled with brown; hilum pale brown.

85647. No. 3053. Station No. Y–447. A medium-small oval yellow bean, mottled with brown; hilum brown.

85648. No. 3054. Station No. Y–448. A medium-small, nearly round, yellow bean, much mottled with brown; hilum brown.

85649. No. 3055. Station No. Y–449. A medium-small oval light-yellow bean, much mottled with brown; hilum brown.

85650. No. 3056. Station No. Y–450. A medium-small oval yellow bean, much mottled with brown; hilum brown.

85651. No. 3057. Station No. Y–451. A medium-small, nearly round, yellow bean, much mottled with brown; hilum brown.

85652. No. 3058. Station No. 452. A large oval yellow bean, mottled with brown; testa much wrinkled and split; hilum brown.

85653. No. 3059. Station No. Y–453. A medium-large oval light-yellow bean, slightly mottled with brown; hilum brown.

85654. No. 3060. Station No. Y–454. A large, oval, slightly flattened, glossy yellow bean, somewhat mottled with brown; hilum light brown.

85655. No. 3061. Station No. Y–455. A medium-sized oval glossy yellow bean, much mottled with brown; hilum pale.

85656. No. 3062. Station No. Y–457. A medium-large oval glossy yellow bean, mottled with brown; hilum light brown.

85657. No. 3063. Station No. Y–458. A medium-sized, small, oval, slightly flattened yellow bean, much mottled with brown; hilum pale brown.

85658. No. 3064. Station No. Y–459. A medium-sized, nearly round, glossy yellow bean, much mottled with brown; hilum brown.

85659. No. 3065. Station No. Y–460. A medium-large oval glossy yellow bean, much mottled with brown; hilum pale brown.

85660. No. 3066. Station No. Y–461. A medium-sized, oval, slightly flattened yellow bean with a pale hilum.

85661 to 85671. From Tokyo.

85053 to 85673—Continued.

85661. No. 3067. A very large, nearly round, yellow bean with a pale hilum; used entirely for food purposes.

85662. No. 3068. A large, flat, black bean with a yellow germ; it appears identical with the variety Flat King (No. 17252).

85663. No. 3069. A very large, nearly round, glossy black bean with a yellow germ; used in making soybean confections.

85664. No. 3083. *Chosen Hakubi.* Received from a bean-curd factory, January 6, 1930. A medium-sized oval yellow bean with a pale hilum. There are a few beans with brown hilums in the sample. Used in making bean curd. In winter this variety is mixed with greenish yellow beans, but in summer it is used alone.

85665. No. 3084. *Hokkaido Kuro Daizu.* Obtained in a grocery store, January 6, 1930. A very large, oval, slightly flattened black bean with a yellow germ; used in making candied beans.

85666. No. 3085. *Hokkaido Tsurunoko.* Obtained in a grocery store, January 6, 1930. A very large oval yellow bean with a pale hilum. This is one of the largest seeded yellow varieties and is used only for food purposes.

85667. No. 3086. *Chosen Aoodama.* Obtained in a bean-curd factory, January 6, 1930. A medium-sized oval greenish yellow bean with a slate-black hilum. It is mixed with yellow varieties and used in making bean curd.

85668. No. 3087. Obtained in a bean-curd factory, January 6, 1930. A mixed sample of medium-sized, greenish yellow and yellow beans, used for making bean curd. In winter the mixed varieties are used for making bean curd; in summer they use the yellow beans. These varieties came from Manchuria.

85669. No. 3088. *Chosen Daizu.* Obtained in a bean-curd factory, January 6, 1930. Medium-sized oval yellow beans with pale hilums; there are a few greenish yellow beans in the sample. Used in making bean curd.

85670. No. 3089. *Akita Daizu.* Obtained in a natto factory, January 6, 1930. A medium-large, nearly round yellow bean with a large brown hilum; used in making string natto.

85671. No. 3098. Obtained from the Nodashoyu Co., Nodamachi, Japan, January 8, 1930. A mixed sample of medium-small to medium-sized oval to nearly round yellow beans; used in making soy sauce. Seed grown in Manchuria. This company uses 20,000 bushels of soybeans a year in the manufacture of soy sauce. It is the largest soy-sauce company in the Orient.

85672. STEPHANANDRA sp. Rosaceae.

No. 3166. December 15, 1929. Near the Imperial University's branch botanical garden, Nikko, Japan. The stephanandras are deciduous shrubs with slender branches, alternate, serrate, and usually lobed leaves, and terminal corymbs or panicles of small white flowers. Closely related to the common ninebark, *Physocarpus opulifolius.*

85673. THALICTRUM ROCHEBRUNIANUM Franch. and Sav. Ranunculaceae. **Meadowrue.**

No. 3160. December 16, 1929. From the branch botanical garden of the Imperial University, near Nikko, Japan. A herbaceous plant with a spray of purplish pink flowers. It may prove to be a fine ornamental.

85674. JUGLANS BOLIVIANA (C. DC.) Dode. Juglandaceae. **Walnut.**

From Santiago, Chile. Seeds presented by Señor Salvador Izquierdo. Received February 4, 1930.

Negra de Bolivie. A large tree resembling the North American *Juglans nigra,* with compound leaves 2 to 3 feet long, made up of about 11 pairs of smooth, ovate leaflets 5 to 8 inches long. The nuts closely resemble those of the black walnut in size, shape, and color. It is native to Bolivia.

85675 and 85676.

From India. Seeds purchased from the Chandra Nursery, Rhenock, Sikkim, Bengal. Received January 18, 1930.

85675. HIBISCUS PUNGENS Roxb. Malvaceae. **Rosemallow.**

An erect bristly annual or perennial native to the tropical Himalayas, with roundish heart-shaped deeply lobed leaves 5 to 8 inches long and purple-centered yellow flowers 5 inches in diameter.

For previous introduction see No. 68338.

85676. MAGNOLIA CAMPBELLII Hook. f. and Thoms. Magnoliaceae.

A beautiful deciduous magnolia from the Himalayas where it ascends to 8,000 feet above sea level. It reaches a height of 80 feet, has very dark bark, large elliptical dark-green leaves, and flowers (usually white) 10 inches in diameter. This magnolia has flowered freely in southern France and Italy.

For previous introduction see Nos. 77975–77977.

85677 to 85691.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, nurserymen. Received January 29, 1930.

85677 to 85680. ACER spp. Aceraceae. **Maple.**

85677. ACER CARPINIFOLIUM Sieb. and Zucc. **Hornbeam maple.**

A small tree, up to 30 feet high, with oblong, sharp-pointed doubly serrate leaves 3 to 5 inches long, short racemes of greenish flowers, and glabrous fruits about an inch long. The bright green hornbeamlike leaves turn bright brownish yellow in autumn. Native to Japan.

85678. ACER CISSIFOLIUM (Sieb. and Zucc.) Koch.

85677 to 85691—Continued.

A deciduous Japanese maple of compact, rounded habit, becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches in length. The minute flowers are produced in May with the leaves, and the keys, which are about an inch long, occur in long racemes. In autumn the foliage turns red and yellow.

For previous introduction see No. 43810.

85679. ACER CRATAEGIFOLIUM Sieb. and Zucc.

A small tree 30 to 35 feet high, with purplish branchlets, subcordate leaves with two to four short lobes near the base, racemes of yellowish white flowers, and fruits with nearly horizontal wings. Native to Japan.

85680. ACER DISTYLUM Sieb. and Zucc.

A deciduous tree about 50 feet high, with deeply cordate, serrulate leaves 4 to 8 inches long, and panicles of yellowish flowers followed by upright panicles of winged fruits. Native to Japan.

85681. HAMAMELIS JAPONICA Sieb. and Zucc. Hamamelidaceae. **Witch-hazel.**

A shrub or small tree up to 30 feet high with broadly ovate or obovate leaves 2 to 4 inches long and flowers an inch across, with revolute sepals purple inside and bright yellow petals, appearing in January and February. Native to Japan.

85682. LEUCOTHOE KEISKEI Miquel. Ericaceae.

A slender evergreen Japanese shrub with ovate-oblong, remotely crenate-serrate leaves 1 to 3 inches long, and axillary and terminal racemes of white cylindrical flowers, closely resembling the American *L. racemosa*.

85683. LILIUM CORDIFOLIUM Thunb. Liliaceae. **Lily.**

A Japanese lily 3 to 4 feet high, with pendulous leaves 12 to 18 inches long and wide, and a raceme of 4 to 10 fragrant white flowers often 6 inches long.

For previous introduction see No. 75677.

85684. LILIUM JAPONICUM Thunb. Liliaceae. **Japanese lily.**

A species rather delicate in cultivation with a globular, white or pale yellow bulb 2 inches in diameter, purple-dotted smooth stems 2 to 4 feet high, 15 to 20 horizontal, lanceolate leaves about 8 inches long, and 1 to 7 deliciously fragrant rose-pink tubular flowers 5 to 7 inches long and wide. Native to Japan.

85685 to 85691. RHODODENDRON spp. Ericaceae.

85685. RHODODENDRON INDICUM (L.) Sweet. **Indica azalea.**

Variety *macranthum hybridum*.

85686. RHODODENDRON KEISKEI Miquel.

A low, sometimes procumbent, evergreen shrub with elliptic to lanceolate leaves 3 inches long, dull-green above and scaly beneath. The broadly funnelform, pale-yellow flowers, 2 inches across, are in clusters of two to five. Native to Japan.

85687. RHODODENDRON LINEARIFOLIUM MACROSEPALUM (Maxim.) Makino. **Azalea.**

A laxly branched, spreading shrub, or up to 10 feet high, with narrowly ovate leaves which are dull green during summer and turn rich vinous purple in autumn. The broadly funnel-shaped, rose-pink, fragrant flowers, 2 inches across, are in clusters of 2 to 10. This belongs to the tsutsusi section and is native to Japan.

85688. RHODODENDRON PENTAPHYLLUM Maxim. (*R. quinquefolium roseum* Rehder). **Five-leaf azalea.**

A deciduous shrub of the rhodora section, up to 20 feet high, with usually five elliptic-lanceolate leaves at the ends of the branches. The rose-pink flowers, 1 to 2 inches across, are solitary or in twos, appearing before or with the leaves, which turn orange to crimson in the autumn. Native to Japan.

85689 and 85690. RHODODENDRON RETICULATUM D. Don. **Rose azalea.**

A much-branched deciduous Japanese shrub up to 25 feet high, belonging to the sciadorhodion section. The branchlets are yellow-brown; the reticulate, broadly ovate leaves, 2 to 3 inches long, are in clusters of two to three; and the slightly 2-lipped, rotate-campanulate flowers are rose-purple to magenta. There are two forms; the ordinary form with 10 stamens, often called *R. rhombicum*, and a form with five stamens, called *R. dilatatum*.

85689. Received as *Azalea dilatatum*.

85690. Received as *Azalea rhombicum*.

85691. RHODODENDRON SERPYLLIFOLIUM Miquel. **Wildthyme azalea.**

A low, much-branched shrub of the tsutsusi section, with narrowly obovate leaves less than half an inch long, crowded at the ends of the branches. The rose-red flowers are solitary and are about an inch across. Native to Japan.

85692. SAGITTARIA SAGITTIFOLIA L. Alismaceae. **Old-world arrowhead.**

From Chosen. Corms collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 23, 1929. Numbered in January, 1930.

No. 1930. November 21, 1929. *Water nut*, secured from the market. This is very good cooked and served with sweet sauce.

For previous introduction see No. 61884.

85693 and 85694.

From Soledad, Cienfuegos, Cuba. Seeds presented by R. M. Grey, Director, Harvard Botanical Garden. Received February 7, 1930.

85693. CITRUS MITIS Blanco. Rutaceae. **Calamondin.**

A small, somewhat spiny Philippine tree, 13 to 20 feet high, with oblong elliptic leaves nearly 4 inches long; axil-

85693 and 85694—Continued

lary, usually solitary, white, fragrant flowers about 1 inch wide, and globular, orange-yellow, smooth-skinned fruits about 2 inches in diameter, with orange-colored, acid, juicy pulp containing large, smooth seeds.

For previous introduction see No. 44140.

85694. CITRUS sp. Rutaceae.

Said to be a hybrid between *Fortunella* (*Citrus*) *japonica and C. grandis* (*decumana*).

85695 to 85697.

From Likiang, Yunnan, China. Seeds collected by Dr. J. F. Rock, National Geographic Society, Washington, D. C. Received February 7, 1930.

85695. ABIES sp. Pinaceae. **Fir.**

No. 18527. Likiang Snow Range, November, 1929. A tree 40 to 50 feet high with large broad needles, silvery beneath, and short ovoid cones which are of even width. The species is quite different from *Abies forresti*, and occurs at 14,500 feet altitude.

85696. KETELEERIA sp. Pinaceae.

November, 1929, Yangtse Gorges, west of the Likiang Snow Range, between 7,000 and 8,000 feet altitude. A tree 50 to 60 feet high with far-spreading crown when it is old. The straw-colored cones are erect as in the Abies, but persistent; the needles also resemble the Abies.

85697. PINUS YUNNANENSIS Franch. Pinaceae. **Yunnan pine.**

November, 1929, Likiang Snow Range. One of the most common trees of Yunnan, varying in height from 30 to 80 feet and with a very straight or crooked trunk, depending on the location and exposure. It prefers well-drained soils, and grows at altitudes ranging from 9,000 to 11,000 feet.

For previous introduction see No. 59427.

85698 to 85724.

From Japan. Seeds and scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 10, 1930.

85698 to 85722. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

Scions received through Dr. K. Nagai, Chief in Research, Imperial Horticultural Experiment Station, Okitsu, Shizuokaken. January 17, 1930.

85698. No. 3368. Station No. 02930.
Aizumishirazu.

85699. No. 3383. Station No. 04430.
Akadango.

85700. No. 3348. Station No. 00930.
Amahyakume.

85701. No. 3343. Station No. 00430.
Egosho.

85702. No. 3366. Station No. 02730.
Emon.

85703. No. 3388. Station No. 04930.
Gosho.

85704. No. 3357. Station No. 01830.
Hana Gosho.

85698 to 85724—Continued.

85705. No. 3382. Station No. 04330.
Handai.

85706. No. 3376. Station No. 03730.
Hiragaki.

85707. No. 3375. Station No. 03630.
Hoshuhachiya.

85708. No. 3354. Station No. 01530.
Garan.

85709. No. 3355. Station No. 01630.
Mizushima.

85710. No. 3373. Station No. 03430.
Fufugaki.

85711. No. 3384. Station No. 04530.
Onidango.

85712. No. 3378. Station No. 03930.
Otani.

85713. No. 3363. Station No. 02430.
Saijo.

85714. No. 3347. Station No. 00830.
Tsukiyo.

85715. No. 3350. Station No. 01130.
Shogatsu.

85716. No. 3359. Station No. 02030.
Yotsudani.

85717. No. 3351. Station No. 01230.
Tohachi.

85718. No. 3356. Station No. 01730.
Toyooka.

85719. No. 3360. Station No. 02130.
Tokudagosho.

85720. No. 3369. Station No. 03030.
Yokono.

85721. No. 3342. Station No. 00330.
Yotsudani.

85722. No. 3349. Station No. 01030.
Zenjim ru.

85723. CASTANEA HENRYI (Skan) Rehd. and Wils. Fagaceae. **Chestnut.**

No. 3391. Seed obtained from the Chugai Shokubutsu Yen, seed merchants and nurserymen, January 19, 1930. A Chinese chestnut which grows 25 to 90 feet high, with oblong lanceolate, long-acuminate leaves, green on both sides. The burs are either solitary or two in a bunch and contain usually but one nut.

For previous introduction see No. 78503.

85724. LITHOCARPUS EDULIS (Makino) Rehder. Fagaceae.

No. 3502. Seed obtained from the Chugai Shokubutsu Yen, seed merchants and nurserymen, January 19, 1930. An evergreen tree native to Japan, with ovate-oblong, short-pointed, entire leaves 3 to 7 inches long, and oblong-ovoid acorns an inch long in very shallow cups.

For previous introduction see No. 78655.

85725. AVENA SATIVA L. Poaceae. **Oats.**

From Dublin, Ireland. Seeds presented by M. Caffrey, University College. Received February 8, 1930.

Glasnevin Sonas. A new stiff-strawed oat variety which originated as a selection from a cross between *Banner* and *Black Tartarian* oats.

85726 to 85729.

From Sicily and Tunisia. Seeds presented by Dr. H. S. Fawcett, University of California. Received February 8, 1930.

85726 to 85728. CITRUS AURANTIUM L. Rutaceae. **Seville orange.**

85726. No. 43. Palermo, Sicily, January 13, 1930. Seeds of large fruits from an especially healthy tree, 50 to 75 years old, growing in clay soil at 1,000 feet altitude.

85727. No. 44. From Menzel bon Zelf, east of Tunis, January 16, 1930. A large healthy tree said to be from 80 to 100 years old, growing in an Arab's orchard.

85728. No. 45. From Nabeul, southeast of Tunis, January 16, 1930. This tree differs from the ordinary sour orange in its habit of growth, its flattened type of fruit, and the smallness of the leaf petiole. In the south of France its flowers are especially prized for their fragrance.

85729. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

No. 46. *Beldi*, meaning in Arabic "fruit of the land." From Menzel bon Zelf, east of Tunis, January 16, 1930. Said to be the original variety cultivated by the Arabs. Tree said to be 120 to 140 years old; fruits round with a high color, but probably lack sufficient acid for the American taste.

85730 to 85740.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in November and December, 1929. Numbered in January, 1930.

85730. AMPELOPSIS BREVIPEDUNCULATA MAXIMOWICZII Rehder. Vitaceae.

No. 1410. Shiraoi, Hokushu, September 29, 1929. A vigorous climbing, deciduous grapelike, woody vine with broadly cordate, deeply 3-lobed to 5-lobed leaves, which are coarsely serrate; dark green above and lighter beneath. The cymes of inconspicuous flowers are followed by fruits about a quarter of an inch across, changing from pale lilac to verdigris color and finally to bright blue. Native to eastern Asia.

85731. ARALIA ELATA (Miquel) Seem. Araliaceae.

No. 1099. Near Nikoro, Hokushu, September 24, 1929. A small hardy Manchurian tree resembling *Aralia spinosa* (Hercules-club) but more treelike, with few spines. It does not form many branches, but the large bipinnate leaves cast a good shade. The greenish white flowers are borne in large panicles, and the berries are dark red when ripe, producing a very pleasing effect.

For previous introduction see No. 75670.

85732. CELTIS SINENSIS Pers. Ulmaceae. **Chinese hackberry.**

No. 1447. Chiaki Park, Akita, October 11, 1929. A tree native to China and Japan, which grows to a height of 60 feet. The broadly ovate leaves, 2 to 4 inches long, are cordate at the base and acuminate at the apex, with a serrate-dentate margin. The dull orange-red fruits are borne on stout pedicels. This tree has proved hardy at the Arnold Arboretum.

85733. COCCULUS TRILOBUS (Thunb.) DC. Menispermaceae. **Japanese snailseed.**

No. 1453. Chiaki Park, Akita, October 11, 1929. A shrubby vine bearing round clusters of purple fruits.

For previous introduction see No. 82420.

85734. EUONYMUS OXYPHYLLUS Miquel. Celastraceae.

No. 1097. Near Nikoro, Hokushu, September 24, 1929. A Japanese shrub or small tree with ovate pointed leaves and many-flowered cymes of dark-red ribbed fruits and bright-red seeds.

For previous introduction see No. 75673.

85735. ILEX SERRATA Thunb. Aquifoliaceae.

No. 1450. Chiaki Park, Akita, October 11, 1929. A slender ornamental, deciduous Japanese shrub about 15 feet high, with oval, finely serrate leaves and small bright-red berries.

For previous introduction see No. 77832.

85736. TILIA JAPONICA Simonk. Tiliaceae. **Japanese linden.**

No. 1446. Chiaki Park, Akita, October 11, 1929. A tree up to 60 feet high with sharply serrate, broadly cordate leaves 2 to 4 inches long, which are light bluish green and pubescent on the veins beneath. Native to Japan.

85737. VITIS THUNBERGII Sieb. and Zucc. Vitaceae. **Grape.**

No. 1474. Near Kawazoe, October 12, 1929. A slender woody vine with rusty-tomentose angled branches, cordate, deeply 3-lobed to 5-lobed and irregularly toothed leaves often 7 inches across, turning crimson in autumn. The panicles of black fruits with purplish bloom are made up of berries nearly half an inch in diameter. Native to Japan and China.

85738. HYDRANGEA PETIOLARIS Sieb. and Zucc. (*H. scandens* Maxim., not Ser.). Hydrangeaceae. **Climbing hydrangea.**

No. 3400. Tokyo, January 19, 1930. A handsome climbing shrub, up to 75 feet, clinging to walls and tree trunks by aerial roots. The broadly cordate, serrate leaves 2 to 5 inches long, are dark green and lustrous above, and the corymbs of white flowers are often 10 inches across. Native to Japan and China.

85739. SYRINGA OBLATA DILATATA (Nakai) Rehder. Oleaceae. **Lilac.**

No. 3393. Near Kobe, January 19, 1929. A loosely branched shrub up to 12 feet high, with ovate, long-pointed leaves 6 inches long, and loose clusters of pale purple-lilac flowers. Native to Chosen.

For previous introduction see No. 78412.

85740. VACCINIUM BRACTEATUM Thunb. Vacciniaseae.

No. 3396. An evergreen shrub 3 to 5 feet high, with remotely serrulate, elliptic leaves, 1 to 3 inches long and leafy

85730 to 85740—Continued.

bracted racemes of reddish flowers followed by red fruits which are said to be edible. Native to Japan and China.

85741 and 85742.

From Giza, Egypt. Seeds presented by Thomas W. Brown. Received January 24, 1930.

85741. HYPHAENE THEBAICA (L.) Mart. Phoenicaceae. **Doum palm.**

A palm about 30 feet high, which is noted as the only branching palm. It grows in sandy and clay soils and is distributed from Upper Egypt to central Africa. The stems of old trees are sometimes forked three to four times. The beautiful yellowish brown fruits are borne in long clusters of 1 to 200. In Upper Egypt people of the poorer classes eat the fibrous husk which tastes much like gingerbread, but is rather hard. The hard tough wood is used for domestic utensils. It is one of the most striking and picturesque of the palms and is capable of withstanding severe droughts.

For previous introduction see No. 70958.

85742. LIVISTONA CHINENSIS (Jacq.) R. Br. Phoenicaceae. **Chinese fan palm.**

A palm, native to China, with a short thick trunk up to 6 feet high and a foot thick, having a crown of many reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch long.

For previous introduction see No. 80187.

85743. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Tunis, Tunisia. Scions presented by the Director, Jardin d'Essais, Sfax. Received February 8, 1930.

No. 5409. *Abricotier gros indigène.*

85744. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Palermo, Sicily. Scions presented by Dr. H. S. Fawcett, University of California. Received February 12, 1930.

No. 48. *Intravaia.* In suburb of Montreale, 1,000 feet above sea level, January 13, 1930. Said to be yellow fleshed. The tree was holding its leaves, or most of them, when all other peach trees near by had shed.

85745. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

From Tunis, Tunisia. Scions presented by Dr. H. S. Fawcett, University of California. Received February 12, 1930.

No. 47. *Beldi*, meaning in Arabic "fruit of the land." Bud wood from same tree, as described under Fawcett No. 46 [No. 85729].

85746. MEIBOMIA TRIFLORA (L.) Kuntze (*Desmodium triflorum* DC). Fabaceae.

From Mayaguez, Porto Rico. Seeds presented by T. B. McClelland, Agricultural Experiment Station. Received February 13, 1930.

85746—Continued.

A small herbaceous annual which covers the ground with a dense mat resembling white clover.

85747. GENISTA MONOSPERMA (L.) Lam. Fabaceae. **Bridal-veil broom.**

From Casablanca, Morocco. Seeds presented by H. Earle Russell, American consul. Received February 14, 1930.

An ornamental leguminous shrub, native to Spain, about 10 feet high, with slender grayish branches and small, very narrow leaves. The fragrant white flowers are in short lateral racemes.

For previous introduction see No. 78902.

85748. KHAYA NYASICA Stapf. Meliaceae.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received February 15, 1930.

The *red mahogany* is one of the most valuable timber trees of Rhodesia, and is also widely distributed over Mozambique. It is fairly rapid in growth, though not equal to some of the eucalypts in this respect. It is found most often growing near streams, but it also occurs on high ground at a distance from water. The timber is very durable and is not attacked by white ants or borers.

For previous introduction see No. 78257.

85749. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Baragua, Cuba. Cuttings presented by D. L. Van Dine, Director, Cuba Sugar Club Experiment Station, through E. W. Brandes, Bureau of Plant Industry. Received February 18, 1930.

Canna Criolla.

85750. CITRUS WEBBERII Wester. Rutaceae. **Alsem.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received February 13, 1920.

Kalpi. A small handsome tree, 15 to 20 feet high, which is very drought resistant. It is particularly abundant in the Mountain Province, Nueva Viscaya, and southern Luzon. The better forms have oblate, very juicy, acid fruits somewhat like the mandarin orange in appearance and between 2 and 3 inches in diameter; these may be used like the lemon.

For previous introduction see No. 80662.

85751. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Moscow, Union of Socialistic Soviet Republics. Seeds purchased from the Pan-Russian Pure Seed Agricultural Cooperative Association, through H. L. Westover, Bureau of Plant Industry. Received February 17, 1930.

Khivinskkhya lucern.

85752 to 85766.

From Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 15, 1930.

85752 to 85766—Continued.

85752. ANEMONE sp. Ranunculaceae.

Collected near Pakha, altitude 5,000 feet, in the mountains near the Chinese border, Tonking, French Indo-China.

85753. CASSIA sp. Caesalpiniaceae.

Collected near Pakha, altitude 3,330 feet, in the mountains of north-central Tonking, French Indo-China.

85754. CASSIA sp. Caesalpiniaceae.

Collected near Laokay, in the mountains forming the northern boundary of Tonking Province, French Indo-China. Altitude unknown.

85755. CASSIA sp. Caesalpiniaceae.

Collected near Pakha, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85756. CROTALARIA sp. Fabaceae.

Collected near Pakha, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85757. DOLICHOS sp. Fabaceae.

Collected near Pakha, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85758. DOLICHOS sp. Fabaceae.

Collected near Pakha, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85759 to 85763. MEIBOMIA spp. Fabaceae.

85759. MEIBOMIA sp.

Collected near Laokay, altitude 5,000 feet, in the mountains of north-central Tonking, French Indo-China.

85760 to 85763. MEIBOMIA spp.

Collected near Pakha, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85760. MEIBOMIA sp.

85761. MEIBOMIA sp.

85762. MEIBOMIA sp.

85763. MEIBOMIA sp.

85764. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Seeds bought at the market of Pakha, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85765 and 85766. ZEA MAYS L. Poaceae. **Corn.**

From the Pakha region, altitude 3,300 feet, in the mountains of north-central Tonking, French Indo-China.

85765. Yellow corn.

85766. White corn.

85767 to 85804. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received November 29, 1929.

85767. No. 853. Collected September 27, 1929, at Gifu Ken, Masuta Gun, Shinohara Mura, by the Agricultural Association at Hida-dani. Trees 30 feet high, 16 inches D. B. H.

85767 to 85804—Continued.

85768. No. 854. Collected September 27, 1929, at Miyagi Ken, Shibata Gun, Kumaiaki Mura, by the Sendai Eirinsho.

85769. No. 855. Collected September 26, 1929, at Iwate Ken by the Iwaizumi Eirinsho.

85770. No. 856. Collected September 27, 1929, at Nagano Ken, Shimoina Gun, Kizawa Mura, Kodogi, by the Imperial Forest Bureau, Iida branch office. Trees 50 feet high, 8 inches D. B. H.

85771. No. 857. Collected September 28 and October 6, 1929, at Miyagi Ken, Katta Gun, Fukuoka Mura, Fukaya, by the Shiraishi Eirinsho. Trees 45 feet high, 8 to 11 inches D. B. H.

85772. No. 858. Collected September 29 and 30, 1929, at Iwate Ken, Shimohei Gun, Iwaizumi, Sawamawari, by the Iwaizumi Eirinsho. Trees 48 feet high, 18 inches D. B. H.

85773. No. 859. Collected September 29, 1929, at Iwate Ken, Iwate Gun, Ippoi Mura, by the Mumakunai Eirinsho. Trees 45 feet high, 14 inches D. B. H.

85774. No. 860. Collected September 30, 1929, at Iwate Ken, Iwate Gun, Mido Mura, Kogakai, by the Mumakunai Eirinsho. Trees 40 feet high, 12 inches D. B. H.

85775. No. 861. Collected September 30 and October 3, 1929, at Yamagata Ken, Higashitagawa Gun, Hongo Mura, by the Hongo Agricultural Association. Trees 60 feet high.

85776. No. 862. Collected September 29, 1929, at Iwate Ken, Ezashi Gun, Komezato Mura, Hitokubi, by the Mizusawa Eirinsho. Tree 51 feet high, 13 inches D. B. H.

85777. No. 863. Collected September 29, 1929, at Nagano Ken, Shimoina Gun, Kizawa Mura, Ajima, by the Imperial Forest Bureau, Iida branch office. Tree 50 feet high, 9 inches D. B. H.

85778. No. 864. Collected October 3, 1929, at Miyagi Ken, Katta Gun, Obara Mura, Akasaka, by the Shiraishi Eirinsho. Tree 48 feet high, 11 inches D. B. H.

85779. No. 865. Collected October 1, 1929, at Iwate Ken, Ezashi Gun, Yanagawa Mura, Kurifuzawa, by the Mizusawa Eirinsho. Tree 51 feet high, 12 inches D. B. H.

85780. No. 866. Collected in October, 1929, at Nagano Ken, Kitasaku Gun, Kamizawa, Nagakura Yama National Forest (rimpan No. 1), Higashi, by the Iwamurata Eirinsho. Trees 35 feet high, 7 inches D. B. H. Mother trees were planted 25 years ago.

85781. No. 867. Collected October 5, 1929, at Miyagi Ken, Miyagi Gun, Nenoshiraishi Mura, Hozawa, Nishikakoe, by the Sendai Eirinsho. Trees 45 feet high, 8 inches D. B. H.

85782. No. 868. Collected October 6, 1929, at Miyagi Ken, Shibata Gun, Kawasaki Mura, by the Sendai Eirinsho. Trees 32 feet high, 10 inches D. B. H.

85783. No. 869. Collected October 4, 7, 10, 1929, at Miyagi Ken, Natori Gun, Akiho Mura. Trees 50 feet high, 12 inches D. B. H.

85767 to 85804—Continued.

85784. No. 870. Collected October 1, 1929, at Iwate Ken, Shimohei Gun, Akka Mura, in the Nen-nenyama, Matsugasawa, Hanjoshi, by the Kuji Eirinsho. Trees 50 to 70 feet high, 18 to 36 inches D. B. H.

85785. No. 871. Collected October 9, 1929, at Nagano Ken, Shimoina Gun, Yamoka Mura, No-obata, by the Iida Eirinsho. Trees 61 feet high, 11 inches D. B. H.

85786. No. 872. Collected October 7, 9, 10, and 11, 1929, at Wakayama Ken, near Okunsin (Koyasen Temple Forest; rimpan Nos. 5, 6, 12, 14). Trees 45 to 50 feet high, 16 inches D. B. H. Mother trees are very straight and tall.

85787. No. 873. Collected October 9, 1929, at Miyagi Ken, Tamazukuri Gun, Kawatabi Mura, by the Kawatabi Eirinsho. Trees 42 feet high, 25 inches D. B. H.

85788. No. 874. Collected October 5, 1929, at Iwate Ken, Kamihei Gun, Tsukemoshi Mura, by the Tono Eirinsho. Trees 55 feet high, 18 inches D. B. H.

85789. No. 875. *Tana-guri.* Presented October 6, 1929, by Yataro Sato, Miyagi Ken, Katta Gun, Fukuoka Mura, Fukaya. Trees 45 feet high, 12 inches D. B. H.

85790. No. 876. Collected October 6, 1929, at Miyagi Ken, Igu Gun, Hippoi Mura. Also collected September 30, 1929, at Kawashimo-kakoe ni, by the Shiraishi Eirinsho. Trees 48 feet high, 18 inches D. B. H.

85791. No. 877. Collected October 6, 1929, at Miyagi Ken, Katta Gun, Obara Mura, Akedo, by the Shiraishi Eirinsho. Trees 42 feet high, 12 inches D. B. H.

85792. No. 878. Collected October 6, 1929, at Miyagi Ken, Katta Gun, Shichigashiku Mura, Watasase, by the Shiraishi Eirinsho. Trees 45 feet high, 12 inches D. B. H.

85793. No. 879. Collected October 1, 1929, at Yamaguchi Ken, Kuga Gun, Sakanye Mura, by Shigeo Hayashi. Trees 55 feet high, 8 inches D. B. H.; nuts small in size.

85794. No. 880. Collected at the same time and place as No. 879 [No. 857931, from a different type of tree with smaller nuts than No. 879.

85795. No. 881. Collected October 9, 1929, at Hokkaido, Kameta Gun, Yunokawa Mura, Kameo Mura, Noddappu, by Yunokawa Shinrin-Jimusho. Trees 55 feet high, 13 to 24 inches D. B. H.

85796. No. 882. Collected October 9, 1929, at the same place as No. 881 [No. 85795], from extra tall mother trees, by Yunokawa Shinrin-Jimusho. Trees 78 to 91 feet high, 24 to 37 inches D. B. H.

85797. No. 883. Collected October 10 and 11, 1929, at Nagano Ken, Kitasaku Gun, Kamizawa, Nishiyama National Forest, Higashi (60 To and 61 Ro), by the Iwamurata Eirinsho. Trees 45 feet high, 18 inches D. B. H.

85798. No. 884. Collected October 12 and 13, 1929, at Nagano Ken, Kitasaku Gun, Nishinagakura Mura, Hoji, Ohira National Forest, by the Iwamurata Eirinsho. Trees 40 feet high, 45 inches D. B. H. Mother trees were planted 25 years ago. Growing mixed with *Larix leptolepis* (karu matsu).

85767 to 85804—Continued.

85799. No. 885a. Collected October 13, 1929, at Akita Ken, Senhoku Gun, Konamiuchi National Forest, by the Kakudate Eirinsho. Trees 45 feet high, 20 inches D. B. H.

85800. No. 885b. Collected at the same place as No. 885a [No. 85799].

85801. No. 886. Collected October 13 and 17, 1929, at Fukushima Ken, Minami-Aizu Gun, Arami Mura, by Gen Odagiri. Trees 30 feet high, 14 inches D. B. H.

85802. No. 888a. Collected October 23, 1929, at Kyoto Fu, Soraku Gun, Toonoo Mura, Mori, by Ryotaro Oura. Trees 20 feet high, 5 inches D. B. H.; nuts of large size.

85803. No. 888b. Collected in the same region as No. 888a [No. 85802]; nuts of medium size.

85804. No. 888c. Collected in the same region as No. 888a [No. 85802]; nuts small in size.

85805. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From Chosen. Seeds purchased by R. K. Beattie, Bureau of Plant Industry. Received December 12, 1929. Numbered in January, 1930.

No. 887. *Heijo guri.* From Seisen Gun, Seisen, 125 miles northeast of Heijo, October 25, 1930.

85806 to 85808. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From China. Seeds obtained by R. K. Beattie, Bureau of Plant Industry. Received January 20, 1930.

Collected November 16, 1929, by Peter Liu at Fa Hua Ssu Temple, north of Peiping.

85806. *Han lu,* Chinese chestnut.

85807. *Tiger paw* chestnut.

85808. *Pai-lu,* Chinese chestnut.

85809 and 85810. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Coroata (Maranhao), Brazil. Seeds presented by the Administrador, Ministerio da Agricultura, Industria e Commercio, Servico do Algodao, Fazenda de Sementes em Coroata. Received February 12, 1930.

85809. GOSSYPIUM sp.

Quebradinho or *Brasileiro,* a kidney cotton.

85810. GOSSYPIUM sp.

Verdao or *Riqueza.*

85811 to 85834. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

From Japan. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 17, 1930.

Obtained through the kindness of Dr. K. Nagai, Chief in Research, Imperial Horticultural Experiment Station, Okitsu, Shizuoka Ken.

85811. No. 3362. *Ama Yotsumizo,* January 18, 1930.

85811 to 85834—Continued.

85812. No. 3372. *Beni Emon,* January 18, 1930.

85813. No. 3364. *Dojo Hachiya.*

85814. No. 3353. *Fukuro Gosho.*

85815. No. 3365. *Fuji.*

85816. No. 3340. *Fuyu.*

85817. No. 3367. *Gionbo.*

85818. No. 3381. *Hira Tanenashi.*

85819. No. 3371. *Inayama.*

85820. No. 3352. *Jirō.*

85821. No. 3344. *Kanro.*

85822. No. 3379. *Kawabata.*

85823. No. 3380. *Kuramitsu.*

85824. No. 3387. *Miyazaki Tanenashi.*

85825. No. 3377. *Mombei.*

85826. No. 3346. *Obishi.*

85827. No. 3358. *Ō Gosho.*

85828. No. 3386. *Ōkubo.*

85829. No. 3345. *Oku Gosho.*

85830. No. 3385. *Onihira.*

85831. No. 3361. *Shimofuri.*

85832. No. 3374. *Takura.*

85833. No. 3341. *Tenjin Gosho.*

85834. No. 3370. *Yotsumizo.*

85835. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Damascus, Syria. Scions presented by Joseph Dabbous, Bab Touma, Damascus. Received February 15, 1930.

Hamway apricot.

85836. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Valence, France. Seeds purchased from Tezier Frères, Valence. Received February 20, 1930.

Luzerne.

85837. GARCINIA GIBBSIAE S. Moore. Clusiaceae.

From Brisbane, Australia. Seeds presented by C. T. White, Government Botanist, through the Arnold Arboretum. Received February 24, 1930.

A wild relative of the mangosteen, which grows in forests in the Bellenden Ker Hills at an altitude of about 2,000 feet. The leaflets are oval, with mucronate tips, and the flowers, in clusters of two or three, are green, later turning brown.

For previous introduction see No. 56698.

85838 and 85839.

From Yucatan, Mexico. Tubers presented by Señor Eduardo Martinez C., Archeological Inspector of the State of Yucatan, Merida, Yucatan. Received February 15, 1930.

85838. DIOSCOREA ALATA L. Dioscoreaceae. **Winged yam.**

Ek-Macal. A short, broad, irregular-shaped yam. It has white flesh and, although somewhat coarse in texture, is of good quality when cooked. The tubers received weighed about 2 pounds each.

85839. XANTHOSOMA sp. Araceae. **Yautia.**

Macul. A yautia with short, thick, white-fleshed tubers of good quality. The tubers received are short and thick and weigh about 4 ounces each. The flesh is white and is very firm, but of agreeable flavor when the tubers are baked or boiled.

85840. ANCYLOCLADUS FIRMUS (Blume) Kuntze (*Willughbeia firma* Blume). Apocynaceae.

From Buitenzorg, Java. Seeds presented by the Director, Botanic Gardens. Received February 28, 1930.

A strong-growing woody vine with a stem 3 to 4 inches in diameter, native to Sumatra. It has long slender tendrils, coriaceous, elliptic leaves 4 inches long, and cymes of small, white, fragrant flowers. A possible source of rubber.

85841 to 85845. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

From Tokyo, Japan. Seeds presented by Mr. Tsukada, Tobacco Monopoly Bureau, Tokyo, through W. W. Garner, Bureau of Plant Industry. Received February 26, 1930.

Crop of 1929.

85841. Variety *petiolata. Kokubuha-kokubu.*

85842. Variety *virginiana. Enshuha-nagashima.*

85843. Variety *virginica. Darumaha-odaruma.*

85844. Variety *petiolata. Suifuha-kataikari.*

85845. Variety *petiolata. Hatanoha-hatano.*

85846. VITIS VINIFERA L. Vitaceae. **European grape.**

From Calvaruso, Italy. Cuttings presented by A. Sergi, through Joseph Sergi, Oakland, Calif. Received February 21, 1930.

Magliola di Uva Corniola.

85847. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

From Union of Socialistic Soviet Republics. Plants collected by H. L. Westover, Bureau of Plant Industry. Received January 8, 1930.

No. 265. From northeastern Chimbai.

85848 to 85864.

From Edinburgh, Scotland. Seeds presented by W. Wright Smith, Regius Keeper, Royal Botanic Garden. Received February 25, 1930.

85848 to 85851. ENKIANTHUS CAMPANULATUS (Miquel) Nicholson. Ericaceae. **Redvein enkianthus.**

85848. Variety *palibinii.* A Japanese shrub with the branches often verticillate, oblanceolate green leaves, paler beneath, and drooping red bell-shaped flowers in a short terminal raceme.

For previous introduction see No. 78921.

85848 to 85864—Continued.

85849. Variety *pallidiflorus*. A shrub with its branches usually verticillate, narrow green leaves, paler beneath, up to 1½ inches long, and sessile terminal racemes of nearly white flowers. Native of Japan.

For previous introduction see No. 78922.

85850. Variety *recurvus*. A Japanese shrub with the branches usually verticillate, lanceolate paper leaves up to 2 inches long, and pink flowers nearly half an inch across, in terminal clusters.

For previous introduction see No. 78923.

85851. Variety *tectus*. A shrub native to Japan, with usually whorled branches, leaves of variable shape up to an inch long, and sessile racemes of pink flowers.

For previous introduction see No. 78925.

85852. ENKIANTHUS CHINENSIS Franch. (*E. sinohimalaicus* Craib). Ericaceae.

A shrub native to China, with elongated branches, lanceolate leaves up to 2 inches long, and salmon-red flowers in shortened racemes.

For previous introduction see No. 78924.

85853. ERICA TETRALIX L. Ericaceae. **Crossleaf heath.**

Variety *rubra*. A low shrub with its leaves in whorls of four and bearing umbellate clusters of rosy flowers. Native to western Europe.

For previous introduction see No. 79157.

85854 to 85856. ERICA VAGANS L. Ericaceae. **Cornish heath.**

A low shrub, native to Europe, a foot or more high, with the leaves in whorls of four or five, and bearing pale purplish red flowers.

For previous introduction see No. 79991.

85854. Variety *alba multiflora*.

85855. Variety *kevernensis*.

85856. Variety *leucantha*.

85857. HEMEROCALLIS PLICATA Hort. Liliaceae. **Daylily.**

A herbaceous perennial with linear leaves and large lilylike flowers.

For previous introduction see No. 78941.

85858. RHODODENDRON AMBIGUUM Hemsl. Ericaceae.

A low evergreen shrub, native to China, with lanceolate leaves 2 to 3 inches long, and flowers, pale-yellow spotted with greenish yellow, 2 inches across.

For previous introduction see No. 77015.

85859. RHODODENDRON TSCHONOSKII Maxim. Ericaceae.

A forest shrub, native to Japan, with flaky bark, elliptic leaves one-third of an inch long, and heads of one to four small white flowers.

For previous introduction see No. 79043.

85848 to 85864—Continued.

85860. SYRINGA KOMAROWI SARGENTIANA C. Schneid. Oleaceae. **Sargent lilac.**

A shrubby lilac up to 15 feet high, native to China, with rugose, ovate-lanceolate leaves, 4 to 6 inches long, pubescent beneath, and very crowded nodding panicles of salmon-rose flowers. It is generally similar to *S. reflexa*.

For previous introduction see No. 78556.

85861. SYRINGA REFLEXA C. Schneid. Oleaceae. **Nodding lilac.**

A shrub 12 to 15 feet high, with rough ovate leaves 3 to 6 inches long, and nearly cylindrical drooping panicles crowded with small flowers which are deep carmine in bud, fading as the flowers open to pink outside and white inside. Native to central China.

For previous introduction see No. 45920.

85862. SYRINGA SWEGINZOWII Koehne and Ling. Oleaceae. **Chengtu lilac.**

An attractive hardy lilac, about 10 feet high, native to western China. The dark-green oval leaves are 2 to 4 inches long, and the fragrant white flowers, brownish rose in the bud, are borne in June in terminal panicles up to 10 inches in length.

For previous introduction see No. 79051.

85863. SYRINGA TOMENTELLA Bur. and Franch. (*S. adamiana* Balf. and Smith). Oleaceae. **Felty lilac.**

A bushy shrub, about 10 feet high, with elliptic leaves which are hairy beneath, and loose, long-branched spikes of fine mauve-pink flowers, produced in late May and early June. The shrub is native to western China.

For previous introduction see No. 78159.

85864. SYRINGA YUNNANENSIS Franch. Oleaceae. **Yunnan lilac.**

A handsome species of open spreading growth, related to *Syringa wilsonii*, but with pale-pink flowers in large panicles, produced in June. The downy leaves have a distinct red midrib, the color being continued through the leafstalk. Native to China.

For previous introduction see No. 76277.

85865. DYERA COSTULATA (Miquel) Hook. f. Apocynaceae.

From Buitenzorg, Java. Seeds presented by the Director, Botanic Garden, Buitenzorg. Received February 28, 1930.

A large tree up to 250 feet high and nearly 7 feet in diameter. The large coriaceous oblong-ovate leaves are borne in whorls of six to eight, and the cymes of small white salver-shaped flowers appear after the leaves have dropped. Native to the Malay Peninsula.

For previous introduction see No. 31362.

85866 to 85868.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 21, 1929. Numbered in February, 1930.

85866 to 85868—Continued.

85866. EUONYMUS MACROPTERUS Rupr. Celastraceae.

No. 1336. Collected near Odomari, Sakhalin Island, September 12, 1929. A shrub or small tree, about 20 feet high, with narrowly oval, wedge-shaped leaves, dense clusters of yellowish flowers, and pink fruits. Native to northeastern Asia.

For previous introduction see No. 72409.

85867. LONICERA CHAMISSOI Bunge. Caprifoliaceae. **Honeysuckle.**

No. 1332. Collected near Odomari, Sakhalin Island, September 12, 1929. A deciduous shrub from the alpine regions of middle and southern Europe, of stiff, rounded habit, reaching a height of 3 to 5 feet, with mostly oval leaves up to 2 inches in length. The pink flowers are produced in pairs from the axils, and the berries are black. It is of little value in gardens.

For previous introduction see No. 43854.

85868. SORBUS SAMBUCIFOLIA (Cham. and Schlecht.) Roem. Malaceae. **Mountain-ash.**

No. 1335. Collected near Odomari, Sakhalin Island, September 12, 1929. A shrub 6 to 9 feet high, with compound leaves made up of 9 to 11 ovate-lanceolate leaflets 2 to 3 inches long and clusters of white flowers followed by red fruits half an inch in diameter. Native to Japan.

85869 to 85905.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 20, 1930.

85869. CAMPANULA PUNCTATA Lam. Campanulaceae. **Spotted bellflower.**

No. 3903. Obtained from Matsuzo Kawashima, Kunozon Shiun, Kuno Village, near Shizuoka, January 23, 1930. A herbaceous perennial about a foot high covered with long loose hairs. The sharply toothed leaves are nearly sessile, and the nodding, cylindrical, white flowers, in clusters of one to four, are spotted inside, strongly ribbed and over 2 inches long. Native to Siberia and Japan.

85870. ILEX sp. Aquifoliaceae. **Holly.**

No. 3904. Obtained in a village near Shizuoka, January 24, 1930. A small amount of seed from a tree 6 inches in diameter and about 20 feet tall. It was loaded with small red berries. The seed is different from any holly we have thus far collected.

85871. RHODODENDRON sp. Ericaceae. **Azalea.**

No. 3901. Collected in Kuno Village, January 25, 1930. Seeds from a native azalea on the mountains at Kunozon Shiun, near Shizuoka.

85872 to 85903. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 85872 to 85895 are from the Iwate Experiment Station, Morioka, January 25, 1930.

85872. No. 3701. *Chotan Kon.* Medium sized, oval, light yellow, with pale hilum.

85869 to 85905—Continued.

85873. No. 3702. *Tsurunoko.* Large, oval, yellow with pale-brown hilum.

85874. No. 3703. Cross *Kawanagare* × *Enoki*; (F_5 × 1_3). Medium-sized, oval, yellow with a pale hilum.

85875. No. 3704. Crossbred=*Kawanagare* × *Chotanotsu.* (F_5 × 29). Medium large, oval, glossy yellow with a pale hilum.

85876. No. 3705. *Akazaya* (red pod). Medium small, oval, yellow with a dark-brown hilum.

85877. No. 3706. *Shirozaya.* Medium sized, oval, light-yellow with a pale hilum.

85878. No. 3707. *Karihatakiya No. 28.* Medium small, oval, glossy yellow with a light-brown hilum.

85879. No. 3708. *Ginta* (silver). Medium sized, oval, glossy yellow with a pale hilum.

85880. No. 3710. *Hachigatsu Mame* (August bean). Medium sized, oval, yellow with a dark-brown hilum.

85881. No. 3711. *Rikun No. 27.* Medium sized, round, glossy yellow with large dark-brown hilum.

85882. No. 3712. *Chotankou* × *Kawanagare* (F_5×38). Medium sized, light yellow, oval, pale hilum.

85883. No. 3714. *Iwate Shirotama No. 1.* Medium sized, nearly round, light yellow with a light-brown hilum.

85884. No. 3715. *Toukichi.* Medium sized, nearly round, yellow, with a brown hilum.

85885. No. 3717. *Kyonen Shirazu* (good yield). Medium sized, oval, light yellow, with a russet-brown hilum.

85886. No. 3718. *Tamatsukuri.* Medium sized, nearly round, cloudy (brown) yellow with a cloudy brown hilum.

85887. No. 3719. *Iwate Shakkinkire No. 1.* Medium sized, oval, glossy yellow with a large dark-brown hilum.

85888. No. 3720. *Chuson.* Medium sized, oval, light yellow with a light-brown hilum.

85889. No. 3721. *Konhai Daiichigo* (cross No. 1). Medium sized, oval, cloudy yellow with a dark-brown hilum.

85890. No. 3723. *Iwate Yagi ichigo* (Iwate Yagi No. 1). Medium sized, round, cloudy (brown) yellow with a large dark-brown hilum.

85891. No. 3724. *Iwate Shirotama No. 2.* Medium sized, nearly round, cloudy (brown) yellow with a pale-brown hilum.

85892. No. 3725. *Iwate No. 1.* Medium sized, oval, yellow with large dark-brown hilum.

85893. No. 3726. *Self F_1* No. 6. Medium sized, oval, yellow, brown hilum.

85894. No. 3727. *Self F_1* No. 9. Medium sized, oval, yellow with a pale-brown hilum.

85869 to 85905—Continued.

85895. No. 3728. *Self F.*[1] No. 3. Medium small, oval, glossy yellow with a brown hilum.

85896. No. 3733. *Chasengoku kugo.* Obtained from the Shizuoka Experiment Station, Shizuoka, January 24, 1930. Small olive brown, oval, much flattened. Used at the station for green manure. Matures in about 150 days and is much like the *Kurosengoku* in habit.

85897. No. 3734. *Koshoku Akidaizu* (yellow fall). Obtained from a small grain store in Shizuoka, January 24, 1930. Medium sized, oval, yellow, with large dark brown hilum.

85898. No. 3735. Station No. 208. Obtained from the Tokachi Branch Experiment Station, Obihiro, Hokkaido, January 20, 1930. Medium sized, oval, light yellow with russet brown hilum.

85899. No. 3736. *Kurosengoku.* Obtained from the Shizuoka Experiment Station, Shizuoka, January 24, 1930. Medium small, oval, slightly flattened; black. Used as a green-manure crop in mulberry plantations. Considered the best green-manure variety. Matures in 170 to 180 days and is of the *Otoonton* type of growth.

85900. No. 3737. Obtained from a bean-sprout factory in the suburbs of Tokyo, January 28, 1930. Sample of mixed yellow varieties used for bean sprouts. Seed is said to have come from Chosen.

Nos. 85901 to 85903 were obtained from the Iwate Experiment Station, Morioka, January 25, 1930.

85901. No. 3738. Mixed sample No. 1. Medium sized, oval, yellow, russet to dark-brown hilum.

85902. No. 3739. Mixed sample No. 2. Medium sized, oval, cloudy (brown) yellow, with russet to dark-brown hilum.

85903. No. 3740. Mixed yellow sample No. 3. Medium small to medium large, light yellow with pale hilum.

85904. VICIA FABA L. Fabaceae.
Broadbean.

No. 3905. B–5–4 *Issun Soramame.* Obtained from Dr. K. Noro, Pomologist of the Agricultural Experiment Station, Shizuoka Ken, January 24, 1930. It came originally from the Osaka Agricultural Experiment Station.

85905. VICIA FABA L. Fabaceae.
Broadbean.

No. 3906. *Otafukumame.* Obtained from Dr. K. Noro, Pomologist, Agricultural Experiment Station, Shizuoka Ken.

85906 to 85928. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Khirghiz Republic, eastern Turkestan, Union of Socialistic Soviet Republics. Seeds collected in the Alampa Pass by W. E. Whitehouse, agricultural explorer, Bureau of Plant Industry, September 4, 1929. Received January 6, 1930.

85906 to 85928—Continued.

Indigenous in the foothills of the mountains near Isbaskent and Andijan, Kirghiz Republic, Union of Socialistic Soviet Republics. Trees small, not over 8 feet high in most cases. The practice of cutting them back for firewood results in branching at the base, giving them a bushy appearance and partially accounting for the small size of the trees. Nuts are small, ranging from three-eighths to seven-eighths of an inch in width and from five-eighths to eleven-sixteenths of an inch in length.

85906. A very plump nut with an isodiametric base and a blunt apex, slightly wider than the base. Shells dark in color with a prominent suture. No splitting.

85907. A small plump nut, variable in shape, with a usually pointed apex; shell dark, kernel yellowish green; 15 per cent of the nuts are split.

85908. A very small plump nut, variable in shape, with a dark shell; kernel yellowish green; 15 per cent of the collection has split shells.

85909. A small nut, variable in size, with a smooth dark-colored shell and a prominent suture.

85910. Nut medium size, dark color, and smooth; apex acuminate. Very few of the nuts are split.

85911. Medium to large nut, uniform in size, especially wide at the basal end, apex pointed. Few of the dark, smooth shells are split.

85912. Medium to large plump nut with a blunt apex. Shell dark and slightly sculptured at the base. None of the nuts are split.

85913. A very small dark-shelled pointed nut. Very few of the nuts show splitting.

85914. A large, fairly plump nut with a slightly sculptured shell and a pronounced suture. This nut is the largest of the collection and shows about 15 per cent splitting.

85915. A smooth-shelled nut with an acuminate apex. The well-developed kernel is uniformly green.

85916. Similar in size to No. 85914, but with a more pointed apex; kernel dark green. About 4 per cent of the nuts show splitting.

85917. A long narrow smooth-shelled nut with an acute apex; kernel uniformly light green in color; 25 per cent of the nuts show splitting.

85918. A smooth dark-colored nut, slightly darker at the base than at the apex; 10 per cent of the nuts show splitting.

85919. A broad plump nut with a slightly sculptured base and a prominent suture; kernel light green; 5 per cent of the nuts show splitting.

85920. A short, very plump nut with an isodiametric base and a blunt apex; the dark shell is very much sculptured; kernel light green. Only 2 per cent of the nuts show splitting.

85921. A long narrow flat nut with a usually pointed apex and a smooth, dark shell, which may be slightly sculptured at the base; kernel light green. About 20 per cent of the nuts show splitting.

85906 to 85928—Continued.

85922. A small nut, variable in size and shape with a smooth, dark shell; kernel uniformly green. Splitting of the shell is rare.

85923. A medium sized plump nut with a pointed apex and a smooth, dark shell with a prominent suture. Very little splitting is observed.

85924. A medium sized, long, narrow, sharply pointed nut, uniform in size, with a smooth dark shell having a prominent suture.

85925. A large plump nut with a blunt apex and a prominent suture; shell sculptured at the base and dark in color.

85926. No. 1. A smooth plump nut, broad at the base, narrowing to a point at the apex; 5 per cent of the nuts show splitting.

85927. No. 2. A smooth, white, rather bluntly pointed nut with a pronounced suture. No splitting was observed.

85928. No. 3. A plump white-colored nut, very uniform in size and shape, with a somewhat prominent suture; kernel uniformly green and moderately oily in taste. Very few of the nuts show splitting.

85929 to 85932. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Segou, French West Africa. Seeds presented by E. Barthaburu, Chef du Service Agronomique, Segou. Received February 27, 1930.

85929 and 85930. GOSSYPIUM HIRSUTUM L. **Upland cotton.**

85929. Variety *Cambodia.*

85930. Variety *Cawnpore American.*

85931. GOSSYPIUM sp.

Variety *Karangani.*

85932. GOSSYPIUM PUNCTATUM Schum. and Thonn. Variety *Kowniba.*

85933 and 85934. ORYZA SATIVA L. Poaceae. **Rice.**

From Burma, India. Seeds presented by A. McKerral, Director of Agriculture, Burma, through the Deputy Director of Agriculture, Southern Circle, Rangoon. Received March 5, 1930.

85933. Variety *Kalamkathi.*

85934. Variety *Rupakhil.*

85935 to 85965.

From Leningrad, Union of Socialistic Soviet Republics. Seeds presented by Prof. A. Kol, Chief, Institute of Applied Botany and New Cultures. Received February 25, 1930.

85935. PISTACIA VERA L. Anacardiaceae. **Pistache.**

No. 110213. Collected by G. Roobtzov, from West Tianshan, Fergana Chain.

85936 to 85953. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Nos. 85936 to 85950 were collected by Kostina and Lintchevsky, Middle Asia, Fergana Chain; the valley of the River Kara Su.

85936. No. 110092. 85937. No. 110105.

85935 to 85965—Continued.

85938. No. 110107. 85945. No. 110128.

85939. No. 110108. 85946. No. 110133.

85940. No. 110116. 85947. No. 110134.

85941. No. 110120. 85948. No. 110135.

85942. No. 110124. 85949. No. 110138.

85943. No. 110125. 85950. No. 110148.

85944. No. 110126.

85951. No. 110165. Collected by N. I. Vavilov, Middle Asia, Fergana Chain; the valley of the River Kara Su.

85952. No. 111268. Collected by Kostina and Lintchevsky, Middle Asia, Fergana Chain; the valley of the River Kara Su.

85953. No. 108864. Collected by N. I. Vavilov, Middle Asia, Kazakstan Tssyk kul.

85954 and 85955. PRUNUS CERASIFERA Ehrh. Amygdalaceae. **Myrobalan plum.**

85954. No. 111262. Collected by Kostina and Lintchevsky, Middle Asia, Fergana Chain; the valley of the River Kara Su.

85955. No. 111263. Collected by Kostina and Lintchevsky, Middle Asia, Fergana Chain, Tscharvak.

85956 to 85961. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. Amygdalaceae. **Plum.**

85956. No. 438/c. Collected by G. Roobtzov, Middle Asia, Djala Abad.

Nos. 85957 to 85961 were collected by G. Roobtzov, North Caucasus.

85957. No. 112010.

85958. No. 112011.

85959. No. 9414. *Alycha.*

85960. No. 9413.

85961. No. 112012.

85962. PRUNUS DOMESTICA L. Amygdalaceae. **Common plum.**

No. 9742. Collected by G. Roobtzov, North Caucasus.

85963. PRUNUS INSITITIA L. Amygdalaceae. **Bullace.**

No. 9412. *Ternowka.* Collected by G. Roobtzov, North Caucasus.

85964. PYRUS COMMUNIS L. Malaceae. **Common pear.**

No. 112007. Edible variety, wild. Collected by G. Roobtzov, North Caucasus.

85965. PYRUS HETEROPHYLLA Regel and Schmalh. Malaceae. **Pear.**

No. 112008. Collected by G. Roobtzov, Middle Asia, Fergana Chain.

85966 to 85968. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

From Argentina. Seed presented by E. H. Mathewson, Bompland, Misiones, through W. W. Garner, Bureau of Plant Industry. Received March 1, 1930.

85966. *Havana* (so-called) from Chile.

85967. *Habana Colorado* (1927 seed).

85968. *Whong Kong* (1928 seed).

85969 to 85979. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Scions obtained by R. K. Beattie, Bureau of Plant Industry. Received March 3, 1930.

For previous introduction see No. 85804.

85969. No. 1001. *Ogawa Tetenchi.*

85970. No. 1002. *Obi-wase.*

85971. No. 1003. *Yakko.*

85972. No. 1004. *Bon I.*

85973. No. 1005. *Gosho.*

85974. No. 1006. *Gora.*

85975. No. 1007. *Kosoji.*

85976. No. 1008. *Tsunehisa.*

85977. No. 1009. *Ogawa Ichigo.*

85978. No. 1010. *Daihachi.*

85979. No. 1011. *Terai.*

85980 to 85991.

From Japan. Scions and tubers obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 3, 1930.

85980 to 85983. DIOSPYROS KAKI L. f. Ebenaceae. Diospyraceae. **Kaki persimmon.**

85980. No. 3914. *Hagakushi.* From the Fukuoka Ken Agricultural Experiment Station, Izumi Mura, Miyako Gun, Fukuoka Ken, January 31, 1930.

85981. No. 3915. *Toyoo Ka.* From the Agricultural Experiment Station, Kyoto Fu, January 28, 1930. They advise that while this variety is not considered the best, it is, however, extensively grown in this prefecturate.

85982. No. 3916. *Kubo* (small fruit). From the Kyoto Fu Agricultural Experiment Station, January 28, 1930. This form matures much earlier than the large-fruited form of this variety.

85983. No. 3917. *Kubo* (large fruited). From the Agricultural Experiment Station, Shimogamo, Kyoto Fu, January 28, 1930. They advise that this is a large-fruited form of *Kubo.* (No. 3916.)

85984 to 85991. IPOMOEA BATATAS (L.) Poir. Convolvulaceae. **Sweetpotato.**

From the Saitama Agricultural Experiment Station, at Urawa, Saitama Ken, February 25, 1930.

85984. No. 3946. *Genji.*

85985. No. 3945. *Hana Sakigake.*

85986. No. 3943. *Kioranda* (Dutch yellow).

85987. No. 3944. *Tai Haku* (large white).

85988. No. 3939. *Me warai.*

85989. No. 3940. *Shin Guro* (black heart).

85990. No. 3941. *Beni aka, Kan sho,* or *Satsuma imo.*

85991. No. 3942. *Beni Oita* or *Crimson Oita.*

85992 to 85998.

From Bologna, Italy. Seeds presented by Ditta Ernesto Pini, through H. L. Westover, Bureau of Plant Industry. Received March 4, 1930.

85992 to 85995. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

85992. Lucern No. 1. From Toscana, Umbria, and Marche.

85993. Lucern No. 2. From Ferrara, Medio Veneto, and Polesine.

85994. Lucern No. 4. From Emilia and Romagna.

85995. Lucern No. 5. From Piemonte Friuli.

85996 to 85998. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

85996. No. 1. From Toscana, Umbria, and Marche.

85997. No. 2. From Emilia and Romagna.

85998. No. 3. From Piemonte.

85999. DIOSCOREA sp. Dioscoreaceae.

From Gold Coast, west Africa. Tuber obtained by David Fairchild, agricultural explorer with the Allison V. Armour expedition. Received April 29, 1927. Numbered in March, 1930.

No. 1214. Variety *Beiyere* in the Twi language. Grown in Togoland. Collected in the market at Akkra, where it forms an important article of diet. The tubers are the largest I have ever seen, being at least 3 feet long and 4 inches in diameter.

86000. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

From Giza, Egypt. Plants presented by Dr. Rahmet Bey, Horticultural Section, Ministry of Agriculture, through Charles R. Crane, Indio, Calif. Received March 10, 1930.

Blood orange.

86001. (Undetermined.)

From Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda, Southern Rhodesia. Received March 6 and 29, 1930.

Potato-nut. Seeds of one of our large timber trees, which is 3 to 4 feet in diameter and has cherrylike wood. The seeds are about the size and shape of acorns; the flavor of the kernel reminds one of a raw potato.

For previous introduction see No. 52809.

86002 to 86154. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Japan. Seeds obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 26, 1930.

86002. No. 3327. Purchased at the food department of a large department store in Mitsukoshi, January 14, 1930. Medium large, greenish yellow seed with black hilum, germ yellow. Used for food purposes.

86003. No. 3330. *Tsurunoko.* Obtained from the Chikuma Miso Co., Tokyo, January 17, 1930. This seed is ob-

86002 to 86154—Continued.

tained from Hokushu and is used in making a special high-grade miso. Seed large, nearly round, with a light-brown hilum.

Nos. 86004 to 86145 were obtained from the Tokachi Branch Experiment Station, Obihiro, Hokushu, January 20, 1930.

86004. No. 3504. *Isabera.* Medium large, oval, brown, yellow germ.

86005. No. 3505. *Chiya Shoryu* (small brown). Branch Station No. 682. Small, slightly flattened, oval, glossy brown, yellow germ.

86006. No. 3506. *Kiio Shokuzu* (Station No. 1384). Very small, much flattened, glossy, early, brown; yellow germ.

86007. No. 3507. *Chadaizu.* Very large, oval, seal brown. Used for green-vegetable purposes.

86008. No. 3508. *Chadaizu.* Large, oval, brown, yellow germ. Used as a green vegetable.

86009. No. 3509. *Yamagato Zairai.* Medium sized, oval, green; green germ, black hilum.

86010. No. 3510. *Aodaizu* (Station No. 1767). Medium sized, oval, slightly clouded with brown about the hilum. green; brown hilum; germ green.

86011. No. 3511. *Aodairyu* (Station No. 946). Large, oval, greenish yellow with black hilum, yellow germ.

86012. No. 3512. *Aodairyu.* Medium sized, oval, green with white hilum.

86013. No. 3513. *Kiikozu.* Medium small, nearly round, green with black hilum.

86014. No. 3514. *Aohiki* (Station No. 1257). Medium small, nearly round, green with black hilum; green germ.

86015. No. 3515. *Aodaizu.* Medium sized, oval, green with russet-brown hilum. germ green.

86016. No. 3516. *Aodairyu.* Medium large, slightly flattened green, oval with dark-brown hilum, green germ.

86017. No. 3517. Medium sized, oval, green with brown hilum, green germ.

86018. No. 3518. *Hiyama* (Branch Station No. 16) (Tokachi No. 223). Medium sized, oval, yellow, with russet-brown hilum.

86019. No. 3519. *Kurakake B.* (Station No. 655). Very large, oval, much flattened, greenish yellow with black hilum, yellow germ. Very much like the *Hato* variety (No. 40118).

86020. No. 3520. *Aoshirozu.* Large, light green, oval, pale hilum, green germ.

86021. No. 3521. *Aoyu.* Large, oval, yellowish green with brown hilum; yellow germ.

86022. No. 3522. *Ao Tsurunoko* (green Tsurunoko). Medium sized, oval, green with dark-brown hilum.

86023. No. 3523. *Goyou Kurakake* (five lives saddle). Large oval, much flattened, greenish yellow, yellow germ, black hilum.

86002 to 86154—Continued.

86024. No. 3524. *Daidzuhinshu satei.* Medium large, bluish green, much flattened, oval, black hilum; yellow germ.

86025. No. 3525. *O Sadefuri* (Station No. 1197). Large, oval greenish yellow, black hilum; yellow germ.

86026. No. 3526. *Tokachi* (Station No. 1865). Medium sized, yellowish green, oval, pale hilum.

86027. No. 3527. *Tsuryoku Shoryu* (Station No. 673). Medium small, yellowish green, oval, yellow germ, pale hilum.

86028. No. 3528. *Aemimame.* Medium small, nearly round, yellow with black hilum.

86029. No. 3529. *Manchuria.* Medium sized, nearly round, yellowish green with pale hilum. Much like *Shingto* (No. 21079); yellow germ.

86030. No. 3530. *Wilson Black* (new). Medium small, much flattened, oval, black; yellow germ.

86031. No. 3531. *Koshurei Marugata daizu* (*Koshurei round*). Medium sized, oval, glossy black; germ green.

86032. No. 3532. *Chusei Kurodaidsu* (from the Oshima Branch Station). Large, oval, black with yellow germ.

86033. No. 3533. *Kurosho.* Small, round, black, green germ. Seed appears identical with the *Kingston* (No. 17255).

86034. No. 3534. *Oriibu Rokku.* Medium small, nearly round, yellow with brown hilum.

86035. No. 3535. *Kuroshoryu* (Station No. 691). Small, round, black; green germ. Seed appears the same as *Kingston* (No. 17255).

86036. No. 3536. *Manshu* (Station No. 1863). Medium sized, oval, yellowish green with russet-brown hilum; yellow germ.

86037. No. 3537. *Kuroshoryu* (Station No. 872). Small, round, black; green germ. Seed very similar to *Kingston* (No. 17255).

86038. No. 3538. *Kurodaizu.* Large, oval, slightly flattened, black.

86039. No. 3539. *Kurodaizu.* Large, nearly round, black; yellow germ.

86040. No. 3540. *Kurodaizu* (from Makubetsu Branch Station). Medium large, oval, black with yellow germ.

86041. No. 3541. *Kurozu.* Large, oval, black; yellow germ.

86042. No. 3542. *Kurodaizu.* Medium sized, nearly round, black; yellow germ.

86043. No. 3543. *Katsuka honen gocho daizu.* Large, nearly round, black; yellow germ.

86044. No. 3544. *Kurodaizu* (Station No. 1839). Very large, oval, black; yellow germ.

86045. No. 3545. *Kokuonshokuzu* (Station No. 1094). Very small, much flattened, black, oval; yellow germ.

86046. No. 3546. *Genshin Koku ou.* Medium small, slightly flattened, dull (sooty) black; yellow germ.

86002 to 86154—Continued.

86047. No. 3547. *Kurodaizu.* Medium large, black, oval; yellow germ.

86048. No. 3548. *Kuroshoryu* (Station No. 1181). From Oshima Branch Station originally. Medium small, nearly round, black; yellow germ.

86049. No. 3603. *Hadakadaizu* (Station No. 517, nonhair). Medium sized, oval, yellow, with russet-brown hilum.

86050. No. 3604. *Rasuto San.* Medium sized, oval, yellow, with brown hilum.

86051. No. 3605. *Akazaya B–1* (red pod B–1). Medium sized, oval, yellow, with large brown hilum.

86052. No. 3606. *Irakudaizu* (Station No. 1360). Medium sized, nearly round, yellow, brown hilum.

86053. No. 3607. Station No. 1215. Medium sized, oval, glossy yellow, with dark-brown hilum.

86054. No. 3608. (Tokachi Branch Station No. 1869.) Medium sized, nearly round, yellowish green, with dark-brown hilum.

86055. No. 3609. *Akazaya B* (red pod–B). Medium sized, oval, yellow, with brown hilum.

86056. No. 3610. *Kojiro* (Tokachi Station No. 1415). Medium sized, oval, yellow, with brown hilum.

86057. No. 3611. *Akazaya* (red pod). (Main Station No. 197.) Medium sized, oval, yellow, dark-brown hilum.

86058. No. 3612. *Tokachi* (Station No. 1183). Medium sized, oval, yellow, with brown hilum.

86059. No. 3613. *Akazaya* (from Hiroshima). Medium sized, oval, yellow with brown hilum.

86060. No. 3614. *Honen Akazaya Konnin B.* Medium sized, oval, yellow, with brown hilum.

86061. No. 3615. *Tokachi 1928–220* (77). No. 1190. Medium large, oval, yellow, with brown hilum.

86062. No. 3616. *Daizu Hinshu satei* (Station No. 1874). Medium sized, oval, glossy yellow, with dark-brown hilum.

86063. No. 3617. *Sangaku* (Kotoni Station No. 3414). Medium sized, oval, yellow, with russet-brown hilum.

86064. No. 3618. *Shoryu bo* (Tokachi Station No. 188). Medium sized, oval, glossy yellow, with brown hilum.

86065. No. 3619. *Tokachi* (Station No. 1206). Medium sized, oval, glossy yellow, with brown hilum.

86066. No. 3620. *Tokachi* (Station No. 1000). Medium sized, oval, yellow, with pale hilum.

86067. No. 3621. *Tsurunoko* (Tokachi Station No. 390). Medium sized, oval, glossy yellow, with russet-brown hilum.

86068. No. 3622. *Hadakadaizu.* Medium small, oval, glossy yellow, with russet-brown hilum.

86069. No. 3623. *Datehadakadaizu* (Tokachi Station No. 595). Medium sized, oval, glossy yellow, with russet-brown hilum.

86002 to 86154—Continued.

86070. No. 3624. *Orugiboru* (Iwate). Medium sized, oval, yellow, with russet-brown hilum.

86071. No. 3625. *Akazaya Konnin* (Hiroo). Medium sized, oval, yellow, with russet-brown hilum.

86072. No. 3626. *Oribu Rokku.* Medium small, nearly round, glossy yellow. with russet-brown hilum.

86073. No. 3628. *Hadakadaizu* (smooth). (Station No. 1870.) Medium sized, oval, yellow, with russet-brown hilum.

86074. No. 3629. *Tamatsukuri* (Station No. 997). Medium sized, oval, yellow, hilum pale to dark brown.

86075. No. 3630. *Mizukugurigunma to Kudai* (Station No. 598). Medium sized, oval, glossy yellow, with brown hilum.

86076. No. 3631. *Shoryu i* (small grain). Medium small, oval, light yellow, with pale-brown hilum.

86077. No. 3632. *Akazaya Konnin A* (red-pot mixture A). (Station No. 753.) Medium sized, oval, glossy yellow, with russet-brown hilum.

86078. No. 3633. *Shoryu A* (small grain A). Medium sized, oval, yellow, with brown hilum.

86079. No. 3634. *Tokachi* No. 1403. Medium sized, oval, yellow, with russet-brown hilum.

86080. No. 3635. *Suigen No. 10* (Oshima) (Tokachi No. 1007). Medium sized, oval, yellow, with pale hilum.

86081. No. 3636. *Hadakadaizu* (glabrous). Medium sized, oval, yellow, with russet-brown hilum.

86082. No. 3637. *Nezumizaya* (Kotini Station No. 6028). Medium sized, oval, glossy yellow, with russet-brown hilum.

86083. No. 3638. *Gindaizu* (silver soybean). Medium sized, oval, yellow, with russet-brown hilum.

86084. No. 3639. *Nanbu Kuro Saya* (Tokachi Station No. 721). Medium small, oval, yellow, with russet-brown hilum.

86085. No. 3640. *Kariha Kairyo* (Hidaka). Medium sized, oval, glossy yellow, with russet-brown hilum.

86086. No. 3641. *Angechichi Kon* (Tokachi Station No. 1797). Medium sized, oval, yellow, with pale hilum.

86087. No. 3642. *Shinohensan* (Tokachi Station 606; Main Station No. 124). Medium sized, oval, light yellow, with russet-brown hilum.

86088. No. 3643. *Kenashidaizu* (nonhair). Medium sized, oval, very light yellow, with russet-brown hilum.

86089. No. 3644. *Daizu Hinshu Satei* (Station No. 192). Medium small, oval, yellow, with russet-brown hilum.

86090. No. 3645. *Geihaku* (Tokachi Station No. 1798). Medium small, oval, yellow, with russet-brown hilum.

86091. No. 3646. Station No. 152 (184). Medium sized, oval, yellow, with brown hilum.

86002 to 86154—Continued.

86092. No. 3647. *Shoryu B* (Station No. 772). Medium sized, oval, glossy yellow, with russet-brown hilum.

86093. No. 3648. *Iwate Shiro Tama No. 1.* Medium sized, oval, yellow, with dark-brown hilum.

86094. No. 3649. *Yun Katsu* (Oshima Station No. 1174). Medium sized, oval, yellow, with brown hilum.

86095. No. 3650. *Shoryushirodaizu* (small white) (Station No. 1076). Medium small, oval, yellow, with brown hilum.

86096. No. 3651. *Kawarakedaizu* (smooth). Medium sized, oval, yellow, with dark-brown hilum.

86097. No. 3652. *Sedakadaizu.* Medium sized, nearly round, glossy yellow, with dark-brown hilum.

86098. No. 3653. *Mizukuguri* (Station No. 599). Medium small, oval, glossy yellow, with dark-brown hilum.

86099. No. 3654. *Kiihoshu* (Station No. 1423). Medium sized, nearly round, very light yellow, with russet-brown hilum.

86100. No. 3655. *Oyachi.* Large, oval, light yellow, with hilum varying from pale to russet brown.

86101. No. 3656. *Houtenhakufi.* Medium sized, oval, light yellow, with pale hilum; brown spots at end of hilum. Very similar to the *Ito Son* variety (No. 17268).

86102. No. 3657. *Konshurei No. 23½* (Station No. 1420). Medium sized, oval, light yellow; pale to light brown hilum.

86103. No. 3658. Station No. 266. Large, oval, light yellow, with pale hilum.

86104. No. 3659. *Konshurei.* Medium large, oval, light yellow, with pale hilum.

86105. No. 3660. *Yun Katsu.* Medium sized, oval, light yellow, with dark-brown hilum.

86106. No. 3661. *Shiryu Kii* (yellow four-seed in pod). Medium sized, nearly round, light yellow, with pale-brown hilum.

86107. No. 3662. *Annen* (Station No. 1777). Medium small, greenish yellow, with pale hilum.

86108. No. 3663. *Shinhonen* (Station No. 703). Medium sized, oval, yellow, with russet-brown hilum.

86109. No. 3664. *Sorachidaizu.* Medium small, oval, glossy, light yellow, with russet-brown hilum.

86110. No. 3665. *Kurozaya Honen* (black pod, good yield). Medium sized, oval, glossy yellow, with russet-brown hilum.

86111. No. 3666. *Taishodaizu* (Station No. 1824). Medium sized, oval, yellow, with dark-brown hilum.

86112. No. 3667. *Hadakadaizu.* Medium small, oval, glossy yellow, with black hilum.

86113. No. 3668. *Oyachi senshitsadairyu* (black eye Oyachi, selected large seed). Medium large, oval, yellow, with black hilum.

86002 to 86154—Continued.

86114. No. 3669. *Hoten Kurohezo* (Mukden Black eye). Medium sized, oval, yellow, with black hilum.

86115. No. 3670. *Shihyoekurohezo* (Black eye) (Station No. 1422). Medium sized, oval, glossy yellow, with black hilum. Seed is very much like black-hilum *Manchu.*

86116. No. 3671. Tokachi Station No. 671. Medium sized, nearly round, greenish yellow, with black hilum.

86117. No. 3672. *Oyachi.* Medium large, oval, glossy yellow, with dark-brown hilum.

86118. No. 3673. *Kurozaya* (black pod) (Kotoni Station No. 6025). Small, oval, greenish yellow, with russet-brown hilum.

86119. No. 3674. *Wase Hadaka* (early smooth). Medium sized, nearly round, yellow, with dark-brown hilum.

86120. No. 3675. *Nonfrost.* Medium sized, nearly round, glossy yellow, with brown hilum.

86121. No. 3676. *Toiku rokugo* (Station No. 6). Medium sized, nearly round, very light yellow, with prominent russet-brown hilum.

86122. No. 3677. *Hata hikari* (Oshima Station No. 1237). Medium large, nearly round, light yellow, with pale-brown hilum.

86123. No. 3678. *Selected Oyachi.* Medium sized, nearly round, yellow, with pale-brown hilum.

86124. No. 3679. Station No. 117–B. Medium small, glossy yellow, with large dark-brown hilum.

86125. No. 3680. *Oyachi Ichigo.* Medium large, oval, glossy yellow, with large brown hilum.

86126. No. 3681. *Chiusei Hadaka* (middle smooth). Medium small, oval, glossy yellow with large dark-brown hilum.

86127. No. 3682. *Kenashidaizu* (smooth). Medium sized, nearly round, light yellow, with brown hilum.

86128. No. 3683. *Karifuto.* Medium sized, oval, yellow with large dark-brown hilum.

86129. No. 3684. *Toiku Shichigo* (Station No. 7). Medium large, nearly round, light yellow, with russet-brown hilum.

86130. No. 3685. *Ran Koshi.* Medium sized, oval, glossy yellow, with russet-brown hilum.

86131. No. 3686. *Nobokadaizu.* Medium small, oval, yellow, with large brown hilum.

86132. No. 3687. *Toiku Kugo.* Medium sized, oval, glossy yellow, with dark-brown hilum.

86133. No. 3688. *Chusei Kurodairyu* (middle black large). Large, oval, slightly flattened, black; yellow germ.

86134. No. 3689. *Kurodaizu.* Very large, black, oval; yellow germ.

86135. No. 3690. *Kuromame.* Very large, oval, black; yellow germ.

86002 to 86154—Continued.

86136. No. 3691. *Kuromame.* Large, slightly flattened, black; yellow germ.

86137. No. 3692. *Chusei Kurodaizu.* Large, oval, slightly flattened, black; yellow germ.

86138. No. 3693. *Daizu Honbetsu.* Medium small, oval, yellow, with russet-brown hilum.

86139. No. 3694. *Akitadaizu.* Large, oval, glossy yellow, with large dark-brown hilum.

86140. No. 3695. Tokachi Station No. 1415. Medium sized, oval, yellow, with dark-brown hilum.

86141. No. 3696. *Oyachi Makubetsu.* Large, oval, glossy yellow, with long dark-brown hilum.

86142. No. 3697. *Akazaya* (red pod). Medium large, oval, glossy, cinnamon brown.

86143. No. 3698. *Akazayadaizu* (red pod) (Station No. 1845). Medium large, oval, cinnamon brown.

86144. No. 3699. *Chairomame.* Medium sized, oval, cinnamon brown; yellow germ.

86145. No. 3700. *Monbetsu Nagaba daizu* (Monbetsu long leaf). Medium sized, oval, glossy brown with concentric bands of black; yellow germ.

Nos. 86146 to 86150 were obtained from the Iwate Experiment Station, Morioka, January 25, 1930.

86146. No. 3709. *Kawanagare.* Medium sized, oval, yellow, with pale hilum.

86147. No. 3713. *Koushu Shirome* (Koushu white eye). Medium large, oval, light yellow, with light-brown hilum.

86148. No. 3716. *Kimusume.* Medium small, oval, glossy yellow, with russet-brown hilum.

86149. No. 3722. *Kouhaidainigo* (cross No. 2). Medium sized, oval, yellow, with pale-brown hilum.

86150. No. 3729. *Iwafune takiya.* Medium small, oval, light yellow, with pale-brown hilum.

86151. No. 3730. *Edamame Furisode.* From the Shizuoka Experiment Station, Shizuoka, January 24, 1930. Medium large, oval, light yellow; mixed as to hilum color; some with pale hilum and some with dark-brown hilum. Used to a very considerable extent in Shizuoka Prefecture as a green vegetable bean.

86152. No. 3731. *Aodaizu.* From a small grain store in Shizuoka, January 24, 1930. Large, greenish yellow, oval, with black hilum. Used extensively in this section as a green vegetable.

86153. No. 3732. *Hongoku.* From a grain store in Shizuoka, January 24, 1930. Medium large, oval, glossy yellow, with a large brown hilum. Grown extensively in this section as a green vegetable.

86154. No. 3627. *Akazaya Konnin* (red good mixed). From the Tokachi Branch Experiment Station, Obihiro, January 30, 1930. Medium small, oval, glossy yellow, with a russet-brown hilum.

86155. EUONYMUS MACROPTERUS Rupr. Celastraceae.

From Japan. Cuttings obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 12, 1929. Numbered in February, 1930.

No. 1336. From near Odomari, Sakalin Island, September 12, 1929.

For previous introduction see No. 85866.

86156 and 86157. FRAGARIA spp. Rosaceae. **Strawberry.**

From Japan. Plants obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 10, 1930.

86156. FRAGARIA sp.

No. 4133. *Showa.* Agricultural Experiment Station, Tochikawa, February 14, 1930. We understand that this variety is quite hardy.

86157. FRAGARIA sp.

No. 4132. *Fukuba.* From the Tokyo Fu Agricultural Experiment Station, Tochikawa, February 14, 1930. This is a winter-forcing variety. Berries sometimes 2 inches or more in length. Quite conical in shape; good, attractive red color which extends well into the berry. The fruit in January and February, here at Tokyo, is really of very good quality. The A–1 berries are attractive and apparently sell quite readily at from 5 to 8 cents apiece American gold. This introduction may prove of interest and value to our experts as well as to strawberry growers.

86158 to 86162.

From Naples, Italy. Cuttings presented through P. E. Caloia, Los Angeles, Calif. Received March 12, 1930.

86158 and 86159. MALUS spp. Malaceae. **Apple.**

86158. MALUS sp.

Limonizella.

86159. MALUS sp.

Mele Rose.

86160 to 86162. PYRUS spp. Malaceae. **Pear.**

86160. PYRUS sp.

Ipodone.

86161. PYRUS sp.

Del Carpino.

86162. PYRUS sp.

30 Ourie.

86163 and 86164. ORYZA SATIVA L. Poaceae. **Rice.**

From Lower Burma, India. Seeds purchased from U. Saw Shwe, Assistant Botanist, Agricultural Station, Hmawbi, Insein District, through A. McKerral, Director of Agriculture, Rangoon. Received March 7, 1930.

86163. *Thitat Emata;* strain No. A 22–53. A long, slender, hard and translucent rice which ripens in about 160 days.

86163 and 86164—Continued.

86164. *Emata;* strain No. A 16–34. Similar to No. 86163, but ripening in about 150 days.

86165. ALBUCA NELSONI N. E. Brown. Liliaceae.

From South Africa. Seeds presented by Miss Olive Abernathy, Lismore, Umtata, Cape of Good Hope. Received March 4, 1930.

A herbaceous perennial with a globose bulb 3 to 4 inches in diameter, four to six bright-green lanceolate leaves 4 feet long and 2 inches wide at the base, and a stout erect peduncle 3 feet high bearing a lax raceme a foot long, of white flowers, 1 to 2 inches long, broadly banded with greenish or reddish brown. The three outer petals are spreading and the three inner are shorter and joined together. Native to South Africa.

86166. CHAMAEDOREA ELATIOR Mart. Phoenicaceae. **Palm.**

From Vera Cruz, Mexico. Seed presented by Dr. C. A. Purpus, Zacuapam, Huatusco. Received March 8, 1930.

A low palm with a flexuous stem 10 to 15 feet high and pinnate leaves 6 to 8 feet long. Native to Mexico.

86167. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Italy. Scions presented by Dr. Mario Calvino, San Remo. Received February 28, 1929. Numbered in March, 1930.

86168. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Spain. Plants presented by Mr. Juan Leyva, La Quinta, Granada. Received March 19, 1929. Numbered in March, 1930.

Admirable Jaune.

86169. FICUS CARICA L. Moraceae. **Common fig.**

From Lerida, Spain. Cuttings presented by Ramon Sala Roqueta, Enginyer Agricola, Balaguer, through Ira J. Condit, University of California, Berkeley, Calif. Received March 11, 1930.

Carabasseta.

86170. ZEA MAYS L. Poaceae. **Corn.**

From Germany. Seeds presented by Dr. Tage Ellinger, of the Union Stock Yards & Transit Co. of Chicago, through E. W. Sheets, Bureau of Animal Industry. Received March 17, 1930.

For use in experimental corn-borer research work.

86171 to 86174. SACCHARUM SPONTANEUM L. Poaceae.

From India. Cuttings presented by T. S. Venkatraman, Government Sugarcane Expert, Lawley Road Port, Coimbatore, through E. W. Brandes, Bureau of Plant Industry. Received March 14, 1930.

86171. *Dacca.*

86172. *Lahore*

86171 to 86174—Continued.

86173. *Rella Gaddi.*

86174. *Geha Bon.*

86175. AGROSTIS LACHNANTHA Nees. Poaceae. **Bentgrass.**

From South Africa. Seeds presented by the officer in charge, Veld Reserve, Fauresmith, Orange Free State, through H. N. Vinall, Bureau of Plant Industry. Received March 17, 1930.

A grass with stems up to 2 feet high, linear leaves 8 inches long, and contracted panicles up to a foot long. Native to South Africa.

86176 to 86210.

From Leningrad, Union of Socialistic Soviet Republics. Seeds presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures, through John H. Parker, Bureau of Plant Industry. Received March 8, 1930.

86176 to 86183. AVENA SATIVA L. Poaceae. **Oats.**

86176. No. 1329.
86177. No. 9452.
86178. No. 25537.
86179. No. 25569.
86180. No. 25570.
86181. No. 25572.
86182. No. 25582.
86183. No. 49415.

86184. AVENA SATIVA ORIENTALIS (Schreb.) Richter. **Oats.**

No. 70276.

86185. HORDEUM DISTICHON NIGRICANS Seringe. Poaceae. **Two-rowed barley.**

No. 39789.

86186 and 86187. HORDEUM DISTICHON NUDUM L. Poaceae. **Two-rowed barley.**

86186. No. 10250.

86187. No. 10283.

86188 and 86189. HORDEUM DISTICHON PALMELLA Harlan. Poaceae. **Two-rowed barley.**

86188. No. 10251.

86189. No. 41101–a.

86190. HORDEUM VULGARE NIGRUM (Willd.) Beaven. Poaceae. **Six-rowed barley.**

No. 10247.

86191. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

No. 10246.

86192 to 86197. SECALE CEREALE L. Poaceae. **Rye.**

86192. No. 69912.
86193. No. 69913.
86194. No. 73089.
86195. No. 73367.
86196. No. 73432.
86197. No. 73407.

86198 to 86210. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

86198. No. 6984.
86199. No. 36107.
86200. No. 39776.
86201. No. 41045.
86202. No. 41063.
86203. No. 73013.
86204. No. 73380.
86205. No. 73339.
86206. No. 73368.
86207. No. 73426.
86208. No. 73422.
86209. No. 73424.
86210. No. 73087

86211. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Brazil. Seeds presented by Mr. Octavio Lamartine, Delegacia do Servico do Algodao Natal, Rio Grande do Norte, through O. F. Cook, Bureau of Plant Industry. Received March 13, 1930.

Moco. The *Moco* cotton is one of the most important long-staple native Brazilian types.

86212. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Java. Seeds presented by M. M. Magillse, the Tuinbouwkundig Ambtenaar, P. O. McCornelis, Pascar Minggoe, through David Fairchild, Bureau of Plant Industry. Received March 19, 1930.

A hermaphrodite variety.

86213 to 86230. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Tashkent, Turkestan. Seeds from the Turkestan Plant Breeding Station, through the Texas Agricultural Experiment Station, College Station, Tex. Received March 8, 1930.

86313 to 86219. GOSSYPIUM HERBACEUM L.

86213. No. 455–a. Origin West Pamir.

86214. No. 454. Jorno-Bukharskaja.

86215. No. 2522–b. Origin Khoresm.

86216. No. 2929. Origin Afghanistan, Kharsbad.

86217. No. 3101. Origin Khoresm.

86218. No. 5028. Origin Asia Minor, vil Ajdin.

86219. No. 7172. Origin Kashghar Artysh.

86220 to 86228. GOSSYPIUM HIRSUTUM L. **Upland cotton.**

86220. No. 0100. *Navrotsky.*

86221. No. 169. *Dekhcar.*

86222. No. 182. *Ak-Djwra.*

86223. No. 0251. *Triumph Navrotsky.*

86224. No. 508. *Batyr.*

86225. No. 1306. *Shreder.*

86226. No. 1838.

86227. No. 2005.

86228. No. 2017.

86229. GOSSYPIUM sp.

No. 407. *Kuldja.*

86230. GOSSYPIUM sp.

No. 0937. *Million Dollar.* Origin China.

86231 to 86237. KALANCHOE spp. Crassulaceae.

From Cambridge, England. Seeds presented by the Director, Botanic Garden, University of Cambridge. Received March 12, 1930.

86231. KALANCHOE CARNEA N. E. Brown.

A succulent perennial with simple stems about 2 feet high, oval to obovate crenate-dentate leaves, and branched cymes of light rose or pink, very fragrant flowers. Native to southern Africa.

86231 to 86237—Continued.

86232. KALANCHOE FELTHAMENSIS Hort.

Said to be a hybrid between *K. flammea* and *K. kirkii.*

86233. KALANCHOE GRANDIFLORA Wall.

A herbaceous perennial with a glaucous stem 2 to 3 feet high, broadly ovate, crenate leaves 2 to 3 inches long, and large compound cymes of greenish yellow flowers. Native to India.

86234. KALANCHOE KIRKII N. E. Brown.

A handsome succulent, native to Mozambique, with terete stems 2 to 4 feet high, simple or branched, leafy about half way up. The opposite, green unspotted leaves are pubescent, and the brilliant orange-scarlet flowers are in corymbose cymes 3 to 6 inches across.

86235. KALANCHOE ROTUNDIFOLIA Haw.

A succulent perennial, 1 to 3 feet high, with a slender stem which has a few leaves at the base and is naked above. The fleshy leaves, 1 to 2 inches long, vary in shape from broadly obovate to spatulate, and are entire or crenate. The small orange or yellow flowers are borne in flat-topped panicles. Native to South Africa.

86236. KALANCHOE SPATHULATA DC.

A succulent perennial 1 to 4 feet high with the lower leaves spatulate-oblong, crenate, 3 to 10 inches long, and the upper leaves, 3 to 4 inches long, very narrow and sometimes trifoliolate. The clear yellow flowers are in flattish corymbs. Native to tropical Asia.

86237. KALANCHOE VERTICILLATA S. Elliott.

An erect herb a foot high with terete fleshy leaves, 1 to 2 inches long, tipped with three linear erect teeth and two broad reflexed teeth. The scarlet flowers are in terminal clusters. Native to Madagascar.

86238. DIOON EDULE Lindl. Cycadaceae.

From Vera Cruz, Mexico. Seeds purchased from Dr. C. A. Purpus. Received March 17, 1930.

Plants with a trunk up to about 6 feet high, pinnately compound leaves 3 to 5 feet long, made up of about 200 linear-lanceolate, sharp-pointed leaflets and ovoid cones 8 to 12 inches long, containing large chestnutlike seeds which are roasted or boiled and eaten. Native to Mexico.

86239. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Wellington, New Zealand. Seeds and scions presented by J. A. Campbell, Director of the Horticulture Division. Received March 19, 1930.

Roxburg Red.

86240 to 86263. CORYLUS spp. Betulaceae.

From Berlin-Baumschulenweg, Germany. Plants presented by L. Spath. Received March 19, 1930.

86240 to 86262. CORYLUS AVELLANA L. **Filbert.**

86240. The normal form.

86241. Variety *aurea.*

86242. Variety *multiflora.*

86240 to 86263—Continued.

86243. Variety *pendula*.

86244. Variety *urticifolia*.

86245. Variety *Barcelonaer von Loddiges*.

86246. Variety *Blumberger Zellernuss*.

86247. Variety *Buttners Zellernuss*.

86248. Variety *Cosford*.

86249. Variety *Daviana*.

86250. Variety *Fichtwerdersche Zellernuss*.

86251. Variety *Gubener Barcelonaer*.

86252. Variety *Gubener Zellernuss*.

86253. Variety *Gunslebener Zellernuss*.

86254. Variety *Gustavs Zellernuss*.

86255. Variety *Hallische Riesennuss*.

86256. Variety *Kaiserin Eugenia*.

86257. Variety *Kunzemullers Zellernuss*.

86258. Variety *Kurzhullige Zellernuss*.

86259. Variety *Minnas Zellernuss*.

86260. Variety *Neue Riesennuss*.

86261. Variety *Prolifique a coque serree*.

86262. Variety *Weisse Lambertanuss*.

86263. CORYLUS COLURNA L. **Turkish hazel.**

A vigorous free-growing tree up to 60 feet in height, with stout more or less horizontal branches, heart-shaped, glossy green leaves 5 inches long, and small hard-shelled nuts inclosed in fleshy hairy green involucres.

For previous introduction see No. 72388.

86264. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Porto Rico. Cuttings presented by Nel T. Cook, Insular Experiment Station. Received March 26, 1930.

86265. OLEARIA ARGOPHYLLA (Labill.) F. Muell. **Asteraceae.**

From Richmond, Australia. Seeds presented by F. H. Baker. Received March 27, 1930.

A tree 20 to 25 feet high, emitting a strong musky odor. The alternate, ovate to lanceolate, entire or denticulate leaves, 3 to 5 inches long, are reticulate above and clothed with silvery silky hairs beneath. The small bluish white asterlike flower heads are in large terminal corymbs. It is native to Australia.

86266 to 86271. VITIS VINIFERA L. Vitaceae. **European grape.**

From Vaprio d'Adda, Italy. Cuttings presented by Luigi Pirovano. Received March 8, 1930.

86266. *Citretello*.

86267. *F. P. 27. Vilmeria*.

86268. *Mon. d'Alexandria*.

86269. *Mon. Deludda*.

86270. *Pirovano*.

86271. *Sultana blanca*.

86272 to 86277. CITRUS spp. Rutaceae.

From Sicily. Scions collected by Dr. H. S. Fawcett, University of California. Received March 20, 1930.

86272. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. **Mandarin orange.**

No. 67. Lentini, Sicily. A good type, fairly seedy.

86273 to 86277. CITRUS SINENSIS (L.) Osbeck. **Orange.**

86273 to 86275. From Lentini, Sicily. Collected in the orchard of Brogna Guiseppe.

86273. No. 62. Variety *Mori*. Most of the fruits are blood red both inside and outside, and about 60 per cent of the fruits are seedless. This is considered their best variety by the Sicilians.

86274. No. 63. Variety *Mori*. Fruits from a tree with an unusual amount of blood color.

86275. No. 64. Variety *Torocco*. Fruits blood red inside, but not on the outside; a very good quality, but the tree is smaller than most other varieties here and does not bear heavily.

86276. No. 65. Francefonte, Sicily. Variety *Torocco*. A different strain and the color is differently placed from that of No. 64 [No. 86275].

86277. No. 66. Lentini, Sicily. Variety *Calabrise*. A late, oval orange with few seeds; considered the best of the Brondo class. In shape, color, and texture it seems to be very like the California Valencia.

86278. PENNISETUM BENTHAMI Steud. Poaceae. **Grass.**

From Casteau, Belgian Congo, Africa. Seeds presented by the Director, Outillage Agricole. Received March 28, 1930.

A coarse grass 6 to 8 feet high with lanceolate leaves, 2 to 3 feet long, and spikes a foot long of dull fawny flowers. Native to the Congo region in Africa, where it is used as a forage plant.

For previous introduction see No. 62915.

86279 to 86400.

From Persia and the Union of Socialistic Soviet Republics. Seeds collected by W. E. Whitehouse, agricultural explorer, Bureau of Plant Industry. Received March 5, 1930.

86279 to 86304. From Persia.

86279 to 86282. ALLIUM CEPA L. Liliaceae. **Onion.**

86279. No. 86. From a bazaar at Kashan, October 15, 1929. One of the best onions raised in Persia.

86280. No. 152. Damghan, November 8, 1929. Locally grown seed.

86281. No. 114. Tehran, November 2, 1929. Locally grown seed.

86282. No. 153. Samnan, November 9, 1929. Locally grown seed.

86283. ALLIUM sp. Liliaceae. **Onion.**

No. 128. *Tareh*. Tehran, November 2, 1929. A leafy vegetable eaten raw or cooked. The narrow leaves are 8 to 10 inches long.

86279 to 86400—Continued.

86284 to 86302. AMYGDALUS spp. Amygdalaceae.

86284 to 86293. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). **Almond.**

86284. No. 48. Tabriz, October 28, 1929. Gift of a Swedish missionary. These almonds are especially noted for their thin shells, which are easily cracked with the fingers.

86285. No. 76. Agda, October 12, 1929. Locally grown seed.

86286. No. 77. Ispahan, October 14, 1929. A variety with bitter seed, from seedling trees.

86287. No. 78. Ispahan, October 14, 1929. Almonds with sweet kernels, from seedling trees growing around the city.

86288. No. 79. Yezd, October 12, 1929. Almonds with sweet kernels, from seedling trees growing in near-by villages.

86289. No. 80. Sultanabad, October 19, 1929. Almonds with sweet kernels, from seedling trees growing in near-by villages.

86290. No. 110. Tehran, November 2, 1929. Almonds with sweet kernels, from seedling trees growing in near-by villages.

86291. No. 111. Tehran, November 2, 1929. Papershelled almonds similar to No. 48 (No. 86284).

86292. No. 160. Samnan, November 9, 1929. Almonds with sweet kernels from seedling trees. Almonds from this place are said to be the best in Persia.

86293. No. 161. Samnan, November 9, 1929. Small papershelled almond, grown locally. Similar to No. 48 (No. 86284).

86294 to 86301. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). **Peach.**

86294. No. 46. Tehran, September 29, 1929. A seedling.

86295. No. 81. Ispahan, October 14, 1929. From seedling trees growing in gardens of near-by villages.

86296. No. 82. Agda, October 12, 1929. Locally grown seed from seedling trees.

86297. No. 83. Tehran, October 30, 1929. Fruits 2 to 3 inches in diameter. (Freestone in shape and in appearance like the Elberta.) Flesh yellow tinged with red around the pit.

86298. No. 109. Tehran, November 2, 1929. From seedling trees growing in gardens of the city.

86299. No. 141. Chimron, November 4, 1929. From locally grown seedling trees.

86279 to 86400—Continued.

86300. No. 309. Agda, November 20, 1929. From locally grown seedling trees.

86301. No. 310. Agda, November 20, 1929. From a seedling tree.

86302. AMYGDALUS SPINOSISSIMA Bunge. **Wild almond.**

No. 308. Agda, November 20, 1929. From the near-by hills.

86303. ANETHUM GRAVEOLENS L. Apiaceae. **Dill.**

No. 118. *Sheveed.* Tehran, November 2, 1929. A leafy vegetable which is cooked and eaten with rice.

86304. BETA VULGARIS L. Chenopodiaceae. **Beet.**

No. 126. Tehran, November 2, 1929. A variety grown locally.

86305. BETA VULGARIS L. Chenopodiaceae. **Beet.**

No. 312. Tashkent, Turkestan, August 14, 1929. A variety grown locally.

86306. BRASSICA OLERACEA CAPITATA L. Brassicaceae. **Cabbage.**

No. 124. Tehran, Persia, November 2, 1929. A variety grown locally.

86307. BRASSICA OLERACEA CAPITATA L. Brassicaceae. **Cabbage.**

No. 137. Tehran, Persia, November 2, 1929. A variety grown locally.

86308. BRASSICA sp. Brassicaceae.

No. 136. *Shalghan.* Tehran, Persia, November 2, 1929.

86309. CARUM CARVI L. Apiaceae. **Caraway.**

No. 318. Tashkent, Turkestan, August, 1929.

86310. CICER ARIETINUM L. Fabaceae. **Chickpea.**

No. 87. *Nokhood.* Kasvin, Persia, September 28, 1929. Said to be one of the best varieties grown in Persia.

86311 to 86321. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

86311. No. 99. Alma Alta, Turkestan, August 22, 1929. A variety grown locally.

86312. No. 33. Kaskelen, Turkestan, August 25, 1929. A small light-green watermelon with red flesh; very seedy and of fair quality.

86313. No. 34. Kaskelen, Turkestan, August 29, 1929. A small light-green watermelon with dark-green stripes, light-red flesh of fair quality, and numerous seeds.

86314. No. 39. Frunze, Turkestan, August 26, 1929. A small round light-green watermelon with stripes scarcely discernible; the sweet pink flesh is of fair quality.

86315. No. 40. Frunze, Turkestan, August 26, 1929. A small round watermelon, mottled light-green color, covered with dark-green stripes which narrow at the apex; the sweet pink flesh is of fair quality.

86279 to 86400—Continued.

86316. No. 41. Frunze, Turkestan, August 26, 1929. A fairly large light-green watermelon with dark-green stripes, thin rind, and pink, sweet, juicy flesh of fair quality.

86317. No. 42. Near Damghan, Persia, September 20, 1929. A watermelon with red seeds.

36318. No. 43. Ursatieyskaya, Turkestan, September 10, 1929. A very large watermelon, 12 to 15 inches long and 12 inches wide, but of poor quality and coarse texture.

86319. No. 85. *Hindyvarneh.* Kesvin, Persia, September 28, 1929. A moderately large round light-green variety with dark-green stripes, sweet very juicy pink flesh of excellent quality, and a thin rind; considered the best watermelon in Persia.

86320. No. 102. Alma Ata, Turkestan, September 22, 1929.

86321. No. 104. Frunze, Turkestan, August 27, 1929. A small round light-green watermelon with distinct thin stripes and sweet juicy pink flesh of fair quality.

86322. CORIANDRUM SATIVUM L. Apiaceae. **Coriander.**

No. 122. *Geshnidje.* Tehran, Persia, November 2, 1929. A leafy vegetable whose leaves are used both cooked and raw.

86323 to 86338. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

86323. No. 31. Near Alma Ata, Turkestan, August 22, 1929.

86324. No. 32. Kaskelon, Turkestan, August 25, 1929. A small yellow oblong oval melon of fair quality.

86325. No. 35. Kaskelon, Turkestan, August 25, 1929. A long narrow green melon with orange-colored flesh of good quality.

86326. No. 36. Kaskelon, Turkestan, August 25, 1929. A large yellow melon with cream-colored flesh of good quality.

86327. No. 37. Frunze, Turkestan, August 26, 1929. A medium-sized cream-colored melon of fair quality, with white flesh, tinged with green.

86328. No. 38. Frunze, Turkestan, August 26, 1929. A large roundish oval melon with moderately juicy cream-colored flesh of good quality.

86329. No. 97. Alma Ata, Turkestan, August 22, 1929. A small roundish oval firm melon with juicy cream to orange-colored flesh. The rind is moderately thick and the seeds are like those of an apple.

86330. No. 98. Alma Ata, Turkestan, August 22, 1929.

86331. No. 100. Alma Ata, Turkestan, August 22, 1929.

86332. No. 113. Tehran, Persia, November 2, 1929. A small early melon of fair quality.

86333. No. 147. Ayvanki, Persia, November 6, 1929. A large oval yellow melon, heavily netted, 12 to 14 inches long, but somewhat variable in size; the firm crisp juicy flesh is cream to orange in color; rind moderately thin. The season is from June 15 to October 15, and the melon will keep in storage until December.

86334. No. 148. Ayvanki, Persia, November 6, 1929. A large greenish yellow oval melon, 12 to 14 inches long, heavily netted with gray netting. The firm juicy cream to yellow-colored flesh is of good quality.

86335. No. 167. *Gorgob.* Ispahan Road, Tehran, Persia, November 15, 1929. A large light-yellow to cream-colored melon covered with a heavy gray netting. The firm, juicy, fine-textured flesh is cream colored and of excellent quality.

86336. No. 168. Damghan, Persia, November 8, 1929. In shape and appearance this is similar to cantaloupes grown in America.

86337. No. 173. Ispahan Road, Tehran, Persia, November 15, 1929. A medium to small yellowish green oval melon with cream-colored flesh of fair quality.

86338. No. 84. *Gorgob.* Ispahan Road, Tehran, Persia, October 2, 1929. A large light-yellow to cream-colored melon covered with a heavy gray netting. The firm, juicy, fine-textured flesh is cream colored and of excellent quality.

86339. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

No. 125. Tehran, Persia, November 2, 1929.

86340. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

No. 130. *Kyar sabs* (green cucumber). Tehran, Persia, November 2, 1929.

86341. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

No. 120. Tehran, Persia, November 2, 1929.

86342. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

No. 117. Tehran, Persia, November 2, 1929. Locally grown.

86343. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

No. 166. Rafsinjan, Persia, November 18, 1929. Originally grown at Reshat, Persia.

86344. CYDONIA OBLONGA Mill. (*Pyrus cydonia* L.). Malaceae. **Quince.**

No. 298. Vooadyl, Turkestan, August 6, 1929. Collected by H. L. Westover in the village of Vooadyl, 15 miles south of Fergana.

86345. DAUCUS CAROTA L. Apiaceae. **Carrot.**

No. 129. *Havidje.* Tehran, Persia, November 2, 1929.

86346 and 86347. JUGLANS REGIA L. Juglandaceae. **Persian walnut.**

Moderately large walnuts with light kernels, from trees apparently fairly hardy and drought resistant.

86346. No. 139. Damovand, near Tehran, Persia, November 4, 1929.

86279 to 86400—Continued.

86347. No. 140. Chimron, near Tehran, Persia, November 4, 1929.

86348. LACTUCA SATIVA L. Cichoriaceae. **Garden lettuce.**

No. 134. *Kahu.* Tehran, Persia, November 2, 1929.

86349. LAGENARIA LEUCANTHA (Duchesne) Rusby (*L. vulgaris* Seringe). Cucurbitaceae. **Calabasn gourd.**

No. 131. Tehran, Persia, November 2, 1929.

86350. LEPIDIUM SATIVUM L. Brassicaceae. **Garden cress.**

No. 133. *Taratizeh.* Tehran, Persia, November 2, 1929. Used as a salad and eaten with rice.

86351. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 121. Tehran, Persia, November 2, 1929.

86352. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

No. 101. Alma Ata, Turkestan, August 23, 1929. A wild apple collected on a mountain side near Alma Ata; indigenous to this region.

86353 to 86362. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

86353. No. 112. Tehran, Persia, November 2, 1929.

86354. No. 143. Chimron, Persia, November 4, 1929.

86355. No. 154. Damghan, Persia, November 8, 1929.

86356. No. 155. Samnan, Persia, November 9, 1929.

86357. No. 165. Rafsinjan, Persia, November 19, 1929.

86358. No. 169. Dilijan, Persia, November 16, 1929.

86359. No. 171. Ardekan, Persia, November 17, 1929.

86360. No. 172. Yezd, Persia, November 20, 1929.

86361. No. 176. Agda, Persia, November 21, 1929.

86362. No. 307. Assadabad, Persia, November 24, 1929.

86363. PETROSELINUM HORTENSE Hoffm. Apiaceae. **Parsley.**

No. 115. *Jaffarri.* Tehran, Persia, November 2, 1929. The leaves are cooked with other food and eaten.

86364 to 86367. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

Grown locally around Kasvin, Persia.

86364. No. 88. October 29, 1929. A long narrow cream-colored bean.

86365. No. 89. October 28, 1929. Red, splashed-cream colored bean.

86366. No. 90. October 28, 1929. A red bean.

86367. No. 91. October 28, 1929. A small white bean.

86368 to 86379. PISTACIA VERA L. Anacardiaceae. **Pistache.**

86279 to 86400—Continued.

86368. No. 49. From Bueen, a small village near Kasvin, Persia, September 28, 1929.

86369. No. 50. Agda, Persia, October 12, 1929. Nuts locally grown and sent as they are sold, without sorting.

86370. No. 51. Nain, Persia, October 12, 1929. Locally grown nuts from the gardens of Nain.

86371. No. 52. Ardekan, Persia, October 5, 1929. Nuts of average quality as grown in gardens of Ardekan.

86372. No. 53. Rafsinjan, Persia, October 8, 1929. Locally grown in near-by villages; selected by a Persian grower.

86373. No. 54. Rafsinjan, Persia, October 8, 1929. Grade MM No. 1. Large white nuts selected by a Persian grower, which are easily hulled by hand; these represent the best grade exported to Germany and America.

86374. No. 55. Rafsinjan, Persia, October 8, 1929. Locally grown seed.

86375. No. 56. Rafsinjan, Persia, October 8, 1929. Grade M No. 1. Selected nuts which are hulled with flails and washed. The nuts are not bright colored and are the second-best grade exported to America.

86376. No. 57. Hematabad, Persia, October 8, 1929. Locally grown seed. Scions of this tree were sent in under No. 83734.

86377. No. 151. Damghan, Persia, November 8, 1929. From trees of which scions were sent in under Nos. 82028–82031.

86378. No. 157. Damghan, Persia, November 8, 1929.

86379. No. 170. Rafsinjan, Persia, November 19, 1929. Orchard run from which M. R. No. 1 grade nuts were sorted.

86380 to 86390. PRUNUS spp. Amygdalaceae.

86380 to 86387. PRUNUS ARMENIACA L. **Apricot.**

Seeds grown locally.

86380. No. 71. Ispahan, Persia, October 14, 1929. Nuts with bitter kernels.

86381. No. 72. Ispahan, Persia, October 14, 1929. Nuts with sweet kernels.

86382. No. 73. Yezd, Persia, October 10, 1929. Nuts with sweet kernels.

86383. No. 74. Rafsinjan, Persia, October 8, 1929. A mixture of bitter and sweet-kerneled seed from fruit grown in local gardens.

86384. No. 75. Agda, Persia, October 12, 1929. Nuts with sweet kernels.

86385. No. 158. Damghan, Persia, November 11, 1929.

86386. No. 159. Samnan, Persia, November 9, 1929.

86387. No. 306. Dilijan, Persia, November 22, 1929.

86279 to 86400—Continued.

86388. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. **Plum.**

No. 106. Turkestan, August 11, 1929. A wild plum collected at a railway station.

86389. PRUNUS CERASUS L. **Sour cherry.**

No. 142. Chimron, Persia, November 4, 1929. From trees growing in local gardens.

86390. PRUNUS DOMESTICA L. **Common plum.**

No. 47. Tehran, Persia, September 28, 1929. A medium-sized yellow-green plum, somewhat like the green gage in appearance.

86391 and 86392. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

Seeds grown locally.

86391. No. 132. Tehran, Persia, November 2, 1929.

86392. No. 319. Tashkent, Turkestan, August, 1929.

86393. SATUREJA HORTENSIS L. Menthaceae. **Summer savory.**

No. 116. *Marzeh.* Tehran, Persia, November 2, 1929. Grown locally in gardens.

86394. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

No. 119. Tehran, Persia, November 2, 1929. A long and narrow variety which is grown locally and eaten with rice.

86395. SPINACIA OLERACEA L. Chenopodiaceae. **Common spinach.**

No. 127. Tehran, Persia, November 2, 1929.

86396 and 86397. TRIFOLIUM RESUPINATUM L. Fabaceae. **Persian clover.**

Seed grown locally.

86396. No. 107. Tehran, Persia, October 28, 1929.

86397. No. 156. Semnan, Persia, November 9, 1929.

86398. TRIGONELLA FOENUM-GRAECUM L. Fabaceae. **Fenugreek.**

No. 138. *Shamballileh.* Tehran, Persia, November 2, 1929. A leafy vegetable used by the natives as food.

86399. ZEA MAYS L. Poaceae. **Corn.**

No. 123. Tehran, Persia, November 2, 1929.

86400. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

From Arpachi, Turkestan.

86401. LUPINUS PILOSUS Murray. Fabaceae. **Lupine.**

From Perth, Western Australia. Seeds presented by C. A. Gardner, Government Botanist, Department of Agriculture, March 24, 1930.

In Western Australia the naturalized blue lupines have proved to be of inestimable value to the pastoralist, particularly the sheep farmer. Stock should not be permitted access to lupines during the young stages of growth, since grazing is fatal to the young plants. If there is an abundance of other green food, stock will not eat the lupine in a green condition. In the summer when the seeds have fallen, it is estimated that a lupine paddock will carry up to four sheep per acre and fatten them.

Not only is the lupine valuable as a fodder plant but also as a soil renovator and fertilizer. Lupines succeed best in light sandy soils, provided the bacteria are present.

For previous introduction see No. 39198.

86402. EUCALYPTUS MARGINATA J. E. Smith. Myrtaceae.

From Perth, Western Australia. Seeds presented by S. L. Kessell, Conservator of Forests. Received March 25, 1930.

The best form of *Jarrah*, from gravelly ironstone ridges in the Darling Range, about 25 miles from the coast. An Australian shrub or small tree often clear of branches for two-thirds of its height. The hard, durable wood is used for timber, piles, and railway ties. The tree will grow in a great variety of soils, but prefers moist, well-drained situations.

For previous introduction see No. 75636.

86403 to 86519.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 17, 1930.

86403. DAUCUS CAROTA L. Apiaceae. **Carrot.**

No. 3976. Kyoto. *Hon beni. Kintoki ninjin.* A large, long, red carrot.

86404 to 86519. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 86404 to 86409 were obtained from the seed and nursery farm, near Keijo, Chosen, January 31, 1930.

86404. No. 3772. *Chantan Shirome.* Medium sized, oval, glossy light yellow, with pale hilum. Used for bean curd, miso, and natto.

86405. No. 3773. *Chantan Chame.* Medium sized, oval, glossy yellow, with large-brown hilum. Used for bean curd, miso, soy sauce, and natto.

86406. No. 3774. *Ekizan.* Medium sized, oval, glossy yellow, with pale hilum. Used for bean curd, miso, and natto.

86407. No. 3775. *Kozu.* Medium sized, oval, glossy light yellow, with pale hilum. Used for bean curd, miso, and natto.

86408. No. 3776. *Kongo.* Medium-large, oval, glossy yellow, with pale hilum. Used for bean curd, miso, and natto.

86409. No. 3777. *Rensen Chame.* Medium sized, oval, glossy yellow, with light-brown hilum. Used for bean curd, miso, and natto.

86410. No. 3794. *Sodefuri.* Purchased from a small store in Nakano, Tokyo Prefecture, February 7, 1930. Medium sized, oval, greenish yellow, with black hilum. Used to a very considerable extent in the Tokyo Prefecture trucking sections as a green vegetable bean.

86403 to 86519—Continued.

86411. No. 3795. *Guiuchi Mame* (Devil Chaser bean). Purchased from a small store in Nakano, Tokyo Prefecture, February 5, 1930. Medium sized, oval, yellow, with large dark-brown hilum. Used when boiled with other vegetables and roasted.

86412. No. 3796. *Hirakuro daizu*. Purchased from the food department of a store in Yokohama, February 7, 1930. Medium large, much flattened, black. Very similar to *Flat King* (No. 17252). Used as a boiled bean in vegetable mixtures and as a boiled bean in sirup.

86413. No. 3797. *Aodaizu*. Obtained from a store in Karmata, February 7, 1930. Medium sized, oval, greenish yellow, with black hilum. Resembles very closely the *Sodefuri* variety, No. 3794. Used as a green vegetable bean.

86414. No. 3798. Obtained from a market in Soonchun, Chulla Nando, February 7, 1930. Sample of mixed native Korean varieties.

86415. No. 3799. Obtained from a market in Soonchun, Chulla Nando, February 6, 1930. Medium small, oval, slightly flattened, brown, with concentric black rings. Selected out of sample No. 3798.

86416. No. 3800. *Aodairyu*. Obtained from the Saitama Ken Agricultural Experiment Station, Urawa, February 8, 1930. Medium sized, greenish yellow, oval, with black hilum. Used as a green vegetable bean.

86417. No. 3801. *Aoshoryu*. Obtained from the Saitama Ken Agricultural Experiment Station, Urawa, February 8, 1930. Medium sized, oval, greenish yellow, with black hilum. Used as a green vegetable bean.

86418. No. 3848. *Nakateosaya* (medium large pod). Obtained from the Tokyo Prefecture Experiment Station, Tachikana, Tokyo, February 15, 1930. Medium large, oval, yellow, with light-brown hilum. Used as an early green vegetable bean in Tokyo Prefecture.

86419. No. 3850. *Kurochuryu* (black middle side). Obtained from the Karafuto (Sakhalin Island) Experiment Institute and Department of Agriculture, Toyohara, Karafuto, February 17, 1930. Medium sized, slightly flattened, black. A very early sort grown on Sakhalin Island.

Nos. 86420 to 86517 were obtained from the Ou Experiment Farm, Imperial Japanese Department of Agriculture and Forestry, Omagari, February 14, 1930.

86420. No. 4001. *Rikuu No. 28*. Medium sized, nearly round, glossy yellow, with russet-brown hilum.

86421. No. 4002. *Rikuu No. 30*. Medium sized, oval, glossy yellow, with brown hilum.

86422. No. 4003. *Rikuu No. 29*. Medium sized, oval, glossy yellow, with brown hilum.

86423. No. 4004. *Kurosayakin*. (Black pod gold.) Medium small, oval, light yellow, with light-brown hilum.

86403 to 86519—Continued.

86424. No. 4005. *Hayata Kiya*. Medium sized, oval, light yellow, with light-brown hilum.

86425. No. 4006. *Mizukuguri*. Medium small, oval, glossy, light yellow, with brown hilum.

86426. No. 4007. *Rikuu No. 3*. Medium sized, oval, glossy, light yellow, with light-brown hilum.

86427. No. 4008. *Rikuu No. 6*. Medium sized, round, light yellow, with pale-brown hilum.

86428. No. 4009. *Rikuu No. 11*. Medium sized, oval, deep glossy yellow, with large dark-brown hilum. Slightly mottled with brown.

86429. No. 4010. *Rikuu No. 8*. Medium sized, oval, deep glossy yellow, with large dark-brown hilum.

86430. No. 4011. *Rikuu No. 9*. Medium sized, oval, glossy yellow, with large dark-brown hilum.

86431. No. 4012. *Rikuu No. 4*. Medium sized, oval, glossy yellow, with brown hilum; slightly mottled with brown.

86432. No. 4013. *Rikuu No. 25*. Medium sized, nearly round, deep glossy yellow, with large dark-brown hilum.

86433. No. 4014. *Rikuu No. 6*. Medium large, oval, glossy light yellow, with light-brown hilum.

86434. No. 4015. *Rikuu No. 17*. Medium small, oval, light yellow, with pale-brown hilum.

86435. No. 4016. *Rikuu No. 22*. Medium sized, oval, yellow (glossy) with pale-brown hilum.

86436. No. 4017. *Rikuu No. 7*. Small, oval, glossy yellow, with brown hilum. Should be of value for sprouts.

86437. No. 4018. *Rikuu No. 15*. Medium large, oval, glossy yellow, with pale hilum.

86438. No. 4019. *Rikuu No. 18*. (Station Bred No. 18.) Large, oval, glossy yellow, with russet-brown hilum.

86439. No. 4020. *Rikuu No. 24*. Medium sized, oval, glossy yellow, with brown hilum.

86440. No. 4021. *Rikuu No. 21*. (Station Bred No. 21.) Medium large, oval, glossy greenish yellow, with dark-brown hilum.

86441. No. 4022. *Shiheigaihakubi*. (Shiheigai white.) Medium sized, oval, yellow, with pale-brown hilum.

86442. No. 4023. *Rikuu No. 20*. Medium sized, oval, light yellow, with brown hilum.

86443. No. 4024. *Soroshi*. Medium sized, oval, yellow, with pale hilum.

86444. No. 4025. *Rikuu No. 19*. (Station Bred No. 19.) Medium sized, nearly round, glossy yellow, with large brown hilum.

86445. No. 4026. *Koshurei hakubi* (Koshurei white-eye). Medium sized, oval, glossy yellow, with pale hilum.

86446. No. 4027. *Daruma No. 2*. Medium sized, oval, glossy yellow, with brown hilum.

86403 to 86519—Continued.

86447. No. 4028. *Koshurei No. 224.* Medium sized, oval, light yellow, with pale hilum.

86448. No. 4029. *Asahi No. 60.* (Sun No. 60.) Medium sized, oval, light yellow, with dark-brown hilum.

86449. No. 4030. *Shiheiga Kuroheso.* (Shiheiga Blackeye.) Medium sized, oval, light glossy yellow, with black hilum.

86450. No. 4031. *Kiihoju.* (Yellow jewel.) Medium sized, nearly round, yellow, with pale hilum.

86451. No. 4032. *Mejiro No. 1.* (White-eye No. 1.) Medium large, oval, deep yellow, with pale hilum.

86452. No. 4033. *Koshurei No. 35.* Medium sized, oval, light yellow, with light-brown hilum.

86453. No. 4034. *Kaigen Shirobana.* Medium sized, oval, glossy light yellow, with pale-brown hilum.

86454. No. 4035. *Shokuroheso.* (Small blackeye.) Medium small, oval, glossy yellow, with brownish black hilum.

86455. No. 4036. *Hotenhakubi.* (Mukden White.) Medium sized, oval, light yellow, with pale hilum.

86456. No. 4037. *Kakukwazoshi.* Medium sized, oval, glossy yellow, with pale hilum.

86457. No. 4038. *Kazusa.* Medium sized, nearly round, light glossy yellow, with russet-brown hilum.

86458. No. 4039. *Shirohachikoku No. 2.* Large, oval, yellow, with light-brown hilum.

86459. No. 4040. *Shiroke No. 9.* (White-hair No. 9.) Medium large, oval, glossy yellow, with light-brown hilum.

86460. No. 4041. *Kefuri No. 1.* Medium-sized, oval, glossy deep yellow, with large dark-brown hilum.

86461. No. 4042. *Karihatakiya.* Medium small, oval, glossy yellow, with pale to dark-brown hilum.

86462. No. 4043. *Kimusume.* Medium small, nearly round, greenish yellow, with russet-brown hilum.

86463. No. 4044. *Bonhaku No. 55.* (Summer White No. 55.) Medium sized, oval, light yellow, with light-brown hilum.

86464. No. 4045. *Ou No. 1.* Medium sized, oval, deep yellow, with dark-brown hilum.

86465. No. 4046. *Itachi.* (Mink.) Medium small, oval, yellow, with russet-brown hilum.

86466. No. 4047. *Itachikawa.* (Mink skin.) Medium small, nearly round, greenish yellow, with russet-brown hilum.

86467. No. 4048. *Ou No. 2.* Medium sized, oval, glossy yellow, with brown hilum.

86468. No. 4049. *Gionbo No. 3.* Medium small, oval, yellow, with pale-brown hilum.

86403 to 86519—Continued.

86469. No. 4050. *Ginnan Gingko.* Medium sized, oval, yellowish green, with russet-brown hilum.

86470. No. 4051. *Meshiro No. 3.* (White-eye No. 3.) Medium small, oval, light yellow, with pale-brown hilum.

86471. No. 4052. *Dekisugi.* (Over yield.) Medium sized, nearly round, yellow, with large brown hilum.

86472. No. 4053. *Ou No. 4.* Medium large, nearly round, deep glossy yellow, with large russet-brown hilum.

86473. No. 4054. *Ou No. 6.* Medium large, oval, glossy greenish yellow, with dark-brown hilum.

86474. No. 4055. *Okuechigo.* Medium small, oval, glossy yellow, with brown hilum.

86475. No. 4056. *Onihadaka.* (Smooth Devil.) Very small, oval, glossy yellow, with brown hilum.

86476. No. 4057. *Shirohana No. 1.* (White flower No. 1.) Medium sized, oval, light yellow, with light-brown hilum.

86477. No. 4058. *Tochiki.* Medium large, oval, light yellow, with pale hilum.

86478. No. 4059. *Rangi.* Medium sized, oval, glossy light yellow, with very light-brown hilum.

86479. No. 4060. *Ishikarishiro.* (Ishikari White.) Medium small, oval, glossy yellow, with light-brown hilum.

86480. No. 4061. *Miyashiro* (shrine). Medium sized, oval, yellow, with pale hilum.

86481. No. 4062. *Tamatsukuri.* Medium sized, oval, yellowish green, with slate-black hilum.

86482. No. 4063. *Toyonaga.* Medium sized, oval, glossy yellow, with brown hilum.

86483. No. 4064. *Oyachi.* Medium large, oval, slightly glossy, yellow, with dark-brown hilum.

86484. No. 4065. *Shakkinnashi.* Medium sized, oval, light yellow, with pale hilum.

86485. No. 4066. *Oyachi No. 1.* Medium sized, oval, yellow, with light to dark-brown hilum.

86486. No. 4067. *Koshiro* (small white). Small, oval, light yellow with light-brown hilum.

86487. No. 4068. *Yogetsu No. 1.* Medium sized, oval, light yellow, with russet-brown hilum.

86488. No. 4069. *Akita No. 1.* Medium sized, nearly round, glossy deep yellow, with large dark-brown hilum.

86489. No. 4070. *Kuromeosaya* (blackeye large pod). Medium large, oval, glossy deep yellow, with large brown hilum.

86490. No. 4071. *Shirohadaka* (smooth white). Medium small, nearly round, glossy yellow, with russet-brown hilum.

86403 to 86519—Continued.

86491. No. 4072. *Chotan.* Medium-sized, nearly round, glossy yellow, with pale hilum.

86492. No. 4073. *Kohachigatsu.* Medium sized, oval, glossy yellow, with large dark-brown hilum.

86493. No. 4074. *Asahi* (Sun). Medium large, nearly round, glossy yellow, with russet-brown hilum.

86494. No. 4075. *Takiya.* (Early Takiya.) Medium sized, oval, light yellow, with pale-brown hilum.

86495. No. 4076. *Tsurunoko.* (Young crane.) Large, oval, light yellow, with very light-brown hilum. Used for food.

86496. No. 4077. *Gindaizu.* (Silver.) Medium sized, oval, yellow, with light-brown hilum.

86497. No. 4078. *Tokichi.* Medium large, oval, glossy yellow, with brown hilum.

86498. No. 4079. *Shirotama.* (White ball.) Medium large, nearly round, glossy yellow, with large russet-brown hilum.

86499. No. 4080. *Yagi No. 1.* Medium sized, nearly round, glossy deep yellow, with large dark-brown hilum.

86500. No. 4081. *Nishitsugaruzairaishu.* Medium sized, oval, glossy yellow, with pale-brown hilum.

86501. No. 4082. *Shiryukii.* (Four seeds yellow.) Medium small, round, yellow, with pale-brown hilum.

86502. No. 4083. *Kaigenshirohana.* Medium sized, oval, light glossy yellow, with pale hilum.

86503. No. 4084. *Taniki.* Medium large, nearly round, glossy yellow, with large dark-brown hilum.

86504. No. 4085. *Chinko.* Medium sized, oval, deep glossy yellow, with russet-brown hilum.

86505. No. 4086. *Akita.* Medium sized, nearly round, glossy yellow, with pale hilum. This variety is extensively grown in northern Japan. Used for food purposes.

86506. No. 4087. *Kurosaya* (black pod). Medium sized, nearly round, glossy deep yellow, with large dark-brown hilum.

86507. No. 4088. *Kobinkatagi.* Medium large, oval, deep yellow, with large dark-brown hilum.

86508. No. 4089. *Takiya.* Medium sized, oval, yellow, with light-brown hilum.

86509. No. 4090. *Ani.* (Brother.) Medium sized, nearly round, dark yellow, with large dark-brown hilum.

86510. No. 4091. *Shirosaya.* (White pod.) Medium sized, oval, light yellow, with pale hilum.

86511. No. 4092. *Niuchan.* Medium sized, oval, very light yellow, with pale hilum.

86512. No. 4093. *Sanryuiri.* (Three-seeded pod.) Medium sized, oval, light yellow, with dark-brown hilum.

86513. No. 4094. *Ou No. 5.* Large, oval, yellow (glossy), with brown hilum.

86403 to 86519—Continued.

86514. No. 4095. *Rikuu No. 26.* Medium sized, nearly round, glossy deep yellow, with pale hilum.

86515. No. 4096. *Rikuu No. 27.* Medium small, nearly round, glossy light yellow, with dark-brown hilum.

86516. No. 4097. *Aochi.* (Green land.) Medium small, oval, yellowish green, with russet-brown hilum.

86517. No. 4098. *Senbon.* Medium small, oval, light yellow, with russet-brown hilum.

86518. No. 4099. *Wase o saya.* (Early large pod.) Obtained from the Tokyo Prefecture Experiment Station, Tachikawa, February 15, 1930. Medium large, oval, yellow, with brown hilum. Used in the Tokyo Prefecture as an early vegetable bean.

86519. No. 4100. *Kuro wase.* (Early black.) Obtained from the Tokyo Prefecture Agricultural Experiment Station, Tachikawa, February 15, 1930. Medium sized, black, slightly flattened. Used as an early green vegetable bean in Tokyo Prefecture.

86520 and 86521.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Director, Canal Zone Experiment Gardens. Received March 20, 1930.

86520. ACROCOMIA SCLEROCARPA Mart. Phoenicaceae. **Macauba palm.**

A graceful, spiny, tropical American palm, 30 to 45 feet high, with a terminal cluster of narrow, pinnate leaves. When mature, the inside of the trunk furnishes excellent starch, equal in quality to that of the cassava plant. The leaves yield strong fiber, utilized by the natives of Paraguay for making hammocks. From the yellowish fruits, about an inch in diameter, an excellent edible oil is expressed.

For previous introduction see No. 61385.

86521. ARRABIDAEA ROTUNDATA Bur. Bignoniaceae.

A woody vine with large panicles of deep rose flowers which make a fine display of color during the dry season on the Pacific slope of the Canal Zone. The compound leaves have two coriaceous ovate leaflets, 2 to 6 inches long, covered with dense white tomentum beneath.

86522 to 86664. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From the Union of Socialistic Soviet Republics. Seeds presented by the Divison of Alfalfa Investigation of the Turkestan Breeding Station, Tashkent, Turkestan, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received March 21, 1930.

From the District of Chimkent, Country of Syr-Darya, Kazak.

86522. No. 1793. Village of Kara-Murt.

86523. No. 1794. Village of Kara-Murt.

86524 to 86529. From the village of Kara-Murt, to the east of Chimkent.

86524. No. 1795.
86525. No. 1796.
86526. No. 1797.
86527. No. 1798.

86522 to 86664—Continued.

86528. No. 1799. 86529. No. 1800.

86530 to 86542. From the village of Tastak.

86530. No. 1801. 86537. No. 1808.
86531. No. 1802. 86538. No. 1809.
86532. No. 1803. 86539. No. 1810.
86533. No. 1804. 86540. No. 1811.
86534. No. 1805. 86541. No. 1812.
86535. No. 1806. 86542. No. 1813.
86536. No. 1807.

86543 to 86548. From the village of Test.

86543. No. 1814. 86546. No. 1817.
86544. No. 1815. 86547. No. 1818.
86545. No. 1816. 86548. No. 1819.

86549 to 86557. From the village of Badam, to the north and east of Chimkent.

86549. No. 1820. 86554. No. 1825.
86550. No. 1821. 86555. No. 1826.
86551. No. 1822. 86556. No. 1827.
86552. No. 1823. 86557. No. 1828.
86553. No. 1824.

86558 to 86567. From the village of Sasik.

86558. No. 1829. 86563. No. 1834.
86559. No. 1830. 86564. No. 1835.
86560. No. 1831. 86565. No. 1836.
86561. No. 1832. 86566. No. 1837.
86562. No. 1833. 86567. No. 1838.

86568 to 86577. From the village of Sairam, to the east of Chimkent.

86568. No. 1839. 86573. No. 1844.
86569. No. 1840. 86574. No. 1845.
86570. No. 1841. 86575. No. 1846.
86571. No. 1842. 86576. No. 1847.
86572. No. 1843. 86577. No. 1848.

86578 to 86606. From the village of Dorofeewka, to the southeast of Chimkent.

86578. No. 1849. 86593. No. 1864.
86579. No. 1850. 86594. No. 1865.
86580. No. 1851. 86595. No. 1866.
86581. No. 1852. 86596. No. 1867.
86582. No. 1853. 86597. No. 1868.
86583. No. 1854. 86598. No. 1869.
86584. No. 1855. 86599. No. 1870.
86585. No. 1856. 86600. No. 1871.
86586. No. 1857. 86601. No. 1872.
86587. No. 1858. 86602. No. 1873.
86588. No. 1859. 86603. No. 1874.
86589. No. 1860. 86604. No. 1875.
86590. No. 1861. 86605. No. 1876.
86591. No. 1862. 86606. No. 1877.
86592. No. 1863.

86607 to 86611. From Parkent District, Tashkent County, Uzbek, to the southwest of Tashkent.

86607. No. 1215. Village of Sukuk, to the south of Parkent.

86522 to 86664—Continued.

86608. No. 1216. Village of Teshu.

86609. No. 1225. Village of Ushun, to the south of Tashkent.

86610. No. 1233. Village of Toy-Tube, to the south of Tashkent.

86611. No. 1271. Village of Disudruk.

86612 to 86628. From the Keless District, County of Tashkent, Uzbek, to the east of Tashkent.

86612 to 86615. Village of Ishan-Bazar, northwest of Tashkent.

86612. No. 2264. 86614. No. 2266.
86613. No. 2265. 86615. No. 2267.

86616. No. 2268. Village No. 3.

86617. No. 2269. Village No. 22.

86618. No. 2270. Village No. 22, commune of Goloshekin.

86619 to 86621. Village No. 23.

86619. No. 2272.

86620. No. 2273.

86621. No. 2275.

86622 to 86624. Village No. 26.

86622. No. 2279.

86623. No. 2280.

86624. No. 2281.

86625. No. 2283. Village No. 24.

86626. No. 2293. Village No. 3.

86627 and 86628. Sharap-Hana, northeast of Tashkent.

86627. No. 2321.

86628. No. 2322.

86629 to 86633. From the Karatash District, County of Tashkent, Uzbek, northeast of Tashkent.

86629. No. 2333. Village No. 24.

86630. No. 2335. Village of Kara-Bog.

86631. No. 2336. Village of Kara-Bog.

86632. No. 2337. Turbat, northeast of Tashkent.

86633. No. 2338. Turbat, northeast of Tashkent.

86634 to 86640. From the District of Keless.

86634. No. 2340. Village of Tobolino, northeast of Tashkent.

86635. No. 2341. Village of Tobolino, northeast of Tashkent.

86636 to 86638. Village of Kaufmanskoe, northeast of Tashkent.

86636. No. 2342.

86637. No. 2344.

86638. No. 2345.

86639. No. 2346. Village of Chicherino, northeast of Tashkent.

86640. No. 2347. Village of Kaplanbek, University farm.

86641 to 86664. From the District of Parkent, County of Tashkent, Uzbek, southwest of Tashkent.

86522 to 86664—Continued.

86641 to 86650. Village of Bosh-Kizil-Say.

86641. No. 2501. 86646. No. 2506.
86642. No. 2502. 86647. No. 2507.
86643. No. 2503. 86648. No. 2508.
86644. No. 2504. 86649. No. 2509.
86645. No. 2505. 86650. No. 2510.

86651 to 86657. Village of Isarak, north of Parkent.

86651. No. 2511. 86655. No. 2515.
86652. No. 2512. 86656. No. 2516.
86653. No. 2513. 86657. No. 2517.
86654. No. 2514.

86658 to 86661. Village of Parkent, south of Tashkent.

86658. No. 2518. 86660. No. 2520.
86659. No. 2519. 86661. No. 2521.

86662 and 86663. Village of Namdanak, south of Parkent.

86662. No. 2522. 86663. No. 2523.

86664. No. 2524. Village of Zarkent, south of Parkent.

86665 to 86689.

From Darjiling, India. Seeds presented by the Curator, Lloyd Botanic Garden. Received March 15, 1930.

86665. ACTINIDIA STRIGOSA Hook. f. and Thoms. Dilleniaceae.

A woody vine, resembling *A. callosa*, with strigose-hispid ovate leaves 5 inches long, axillary cymes of white flowers nearly an inch across, and ovoid edible fruits. Native to India.

86666. ALLIUM VICTORIALIS L. Liliaceae. **Onion.**

One of the most distinct species of European Allium, with stems about 2 feet high, leaves resembling those of lily-of-the-valley, and white or greenish white flowers.

For previous introduction see No. 66434.

86667 to 86669. BERBERIS spp. Berberidaceae. **Barberry.**

86667. BERBERIS ANGULOSA Wall.

A handsome shrub, native of India, 4 to 5 feet high, with 1-parted and 5-parted spines, obovate spiny leaves which are whitish beneath, large solitary globose orange-yellow flowers half an inch wide, and ellipsoid red fruits.

For previous introduction see No. 79151.

86668. BERBERIS WALLICHIANA DC.

A somewhat tender evergreen barberry from temperate regions in the Himalayas, where it ascends to about 10,000 feet. The shining black-purple berries are produced in dense clusters.

For previous introduction see No. 65756.

86669. BERBERIS sp.

86670. CALLICARPA VESTITA Wall.

86665 to 86689—Continued.

A medium-sized tree, often 30 feet high, with a thick trunk and ovate, acute leaves with silky white lower surfaces, 4 to 10 inches long. The lavender flowers are in axillary cymes. It is a native of Nepal and Sikkim, India, where it ascends to 4,000 feet.

For previous introduction see No. 47652.

86671. ERIOBOTRYA HOOKERIANA Decaisne. Malaceae.

A small, stout-branched tree with thick, leathery, oblong, sharply toothed leaves up to a foot in length; large panicles of small white flowers, and egg-shaped yellow fruits about an inch long. Native to the eastern Himalayas between 6,500 and 8,000 feet altitude.

For previous introduction see No. 65252.

86672. EVODIA ROXBURGHIANA Benth. Rutaceae.

A small tree with opposite branches, trifoliolate leaves having oblanceolate to obovate leaflets 2 to 5 inches long, and dense cymes of small yellowish green flowers. Native to southeastern Asia.

86673 to 86675. FICUS spp. Moraceae. **Fig.**

86673. FICUS HIRTA Vahl.

A shrub or small tree with leaves 5 to 12 inches long, varying from ovate to lanceolate and entire or three lobed to five lobed. Native to southeastern Asia.

86674. FICUS HOOKERI Miquel.

A subtropical tree with large oval leaves up to 11 inches long, native to the temperate Himalayas of northeastern India. It is of possible use as a shade tree for the warmer parts of the Gulf States and California.

For previous introduction see No. 68336.

86675. FICUS ROXBURGHII Wall.

A low spreading evergreen tree, native to India, 20 to 30 feet high, with broadly ovate, cordate, entire or toothed leaves and russet-brown or purple fruits 2 inches in diameter.

For previous introduction see No. 77952.

86676. GERBERA KUNZEANA Braun and Aschers. Asteraceae.

A herbaceous perennial with a rosette of oblong to ovate, lyrate-pinnatifid leaves 5 to 10 inches long, and bracted scapes a foot high, bearing white or pink asterlike flower heads 1 to 3 inches across. Native to temperate slopes of the Himalayas in India.

For previous introduction see No. 39017.

86677. ILEX FRAGILIS Hook. f. Aquifoliaceae. **Holly.**

A small tree with bright, deep-green leaves which are more membranous than any of the other Indian species, and fleshy, globular red fruits. Native to the mountains of Sikkim and Bhutan, India.

For previous introduction see No. 47697.

86678. ILEX WIGHTIANA Wall. Aquifoliaceae. **Holly.**

86665 to 86689—Continued.

A large tree with a trunk 6 feet in diameter, oblong-ovate coriaceous leaves 2 to 5 inches long, small umbels of minute white flowers, and smooth round berries one-fourth of an inch in diameter. Native to India and Ceylon.

86679. INDIGOFERA DOSUA Buch.-Ham. Fabaceae. **Indigo.**

A low shrub with woody branches, covered with short, gray or brownish pubescence. The leaves, 1 to 3 inches long, bear leaflets less than half an inch long, which are dull green above and glaucous below. The racemes of bright-red flowers are 1 to 3 inches long with lanceolate-cuspidate silky bracts.

For previous introduction see No. 75961.

86680. INDIGOFERA PULCHELLA Roxb. Fabaceae. **Indigo.**

A shrub 4 to 6 feet high with compound leaves 3 to 6 inches long, made up of 13 to 17 subcoriaceous oblong leaflets 1 inch long, and racemes 3 inches long of bright red flowers. Native to the lower slopes of the Himalayas in India.

86681. IRIS CLARKEI Baker. Iridaceae. **Clarke iris.**

A curiously local Himalayan iris, native to a circumscribed area in the Sikkim and Bhutan region at altitudes between 6,000 and 11,000 feet, in ground that is swampy half the year and frozen hard under snow during most of the remaining months. The narrow leaves, 2 feet long, droop at the tops; the upper surface is polished and shiny, the under side glaucescent. The solid stem is 2 feet long and bears one or two lateral heads. The falls are blue-purple, blotched with white, and are reflexed laterally. The upper part of the haft is marked with yellow. The reddish purple, lanceolate standards are poised almost horizontally. The styles form the highest point of the flowers; they are keeled, very convex, and 1½ inches long.

For previous introduction see No. 76251.

86682 to 86684. MEIBOMIA spp. Fabaceae.

86682. MEIBOMIA CEPHALOTES (Roxb.) Kuntze (*Desmodium cephalotes* Wall.).

A tall shrub with densely silky, acutely angled, zigzag branches and compact umbels of deep-red flowers. It is native to the eastern Himalayas. Cattle and goats are said to be fond of the leaves.

For previous introduction see No. 61612.

86683. MEIBOMIA CONFERTA (DC.) Kuntze (*Desmodium confertum* DC.).

A shrubby plant with trifoliolate leaves made up of oblong to obovate entire leaflets 3 to 6 inches long, and axillary or terminal racemes of rather large flowers. Native to northern India.

86684. MEIBOMIA FLORIBUNDA (D. Don.) Kuntze (*Desmodium floribundum* D. Don.).

A woody, thickly pubescent Himalayan plant with very copious axillary and terminal racemes of red flowers.

86665 to 86689—Continued.

For previous introduction see No. 47721.

86685. PANDANUS FURCATUS Roxb. Pandanaceae. **Screwpine.**

One of the most ornamental of the screwpines, which attains a height of about 20 feet, with dark green spiny leaves over 10 feet long, gracefully arching and somewhat spirally arranged. The whitish gray inflorescence emits a very agreeable odor. Native to the East Indies.

For previous introduction see No. 72603.

86686. STYRAX HOOKERI C. B. Clarke. Styracaceae. **Snowbell.**

A tree often 40 feet high, native to Sikkim and Bhutan, at altitudes ranging from 6,000 to 7,000 feet. The white flowers, 1 inch long, are tomentose outside, and the young branches are stellate-pubescent. The wood is white, close-grained, and moderately hard.

For previous introduction see No. 80087.

86687 to 86689. THALICTRUM spp. Ranunculaceae. **Meadowrue.**

86687. THALICTRUM CHELIDONII DC.

A very beautiful ornamental plant, 15 inches high, with lovely pale-green foliage, pubescent beneath. The delicate, silvery lavender flowers, over an inch across, are borne in graceful sprays.

For previous introduction see No. 50338.

86688. THALICTRUM CULTRATUM Wall.

A glabrous herbaceous perennial 2 to 4 feet high, with compound leaves made up of obovate leaflets half an inch long, and lax panicles of greenish white flowers. Native to the temperate Himalayas in India.

86689. THALICTRUM ELEGANS Wall.

A herbaceous perennial a foot high, with decompound leaves made up of small, suborbicular, 3-lobed leaflets and sparingly branched panicles of small greenish purple flowers. Native to the temperate slopes of the Himalayas in India.

For previous introduction see No. 50339.

86690 to 86692.

From Darjiling, India. Seeds presented by the Curator, Lloyd Botanic Garden. Received March 28, 1930.

86690. EVODIA FRAXINIFOLIA (D. Don.) Hook. f. Rutaceae.

A small, much-branched, densely leafy tree, smelling, when bruised, much like caraway. The bright-green compound leaves are 8 to 12 inches long; the white flowers are borne in axillary and terminal cymes, and the red fruits are less than an inch in diameter. In Sikkim, India, where this tree is native, the soft white wood is used for posts of huts.

For previous introduction see No. 47682.

86691. MEIBOMIA SEQUAX (Wall.) Kuntze (*Desmodium sequax* Wall.). Fabaceae.

86690 to 86692—Continued.

A shrub, 2 to 20 feet high, with the branches covered with thick gray or brown pubescence and with red flowers in copious racemes. It is native to the Himalayas from Simla to Sikkim, India.

For previous introduction see No. 60652.

86692. MEIBOMIA TILIAEFOLIA (D. Don) Kuntze (*Desmodium tiliaefolium* D. Don). Fabaceae.

A hardy and more or less ornamental deciduous shrub, with slender terete branches, thick green trifoliolate leaves about 4 inches long, and red flowers in lax racemes often a foot long. It is native to the Himalayas from 3,000 to 9,000 feet altitude. The bark yields an excellent fiber which is used for rope making; the leaves are good fodder, and the roots are used medicinally as a tonic and diuretic.

For previous introduction see No. 47726.

86693 to 86695.

From Honolulu, Hawaii. Seeds presented by Mr. Harold L. Lyon, in charge, Department of Botany and Forestry, Hawaiian Sugar Planters' Association. Received March 25, 1930.

86693. ACACIA KOA A. Gray. Mimosaceae. **Koa.**

A large spreading tree, up to 60 feet high, native to the Hawaiian Islands. The coriaceous falcate phyllodes are 5 to 7 inches long, and the small white flowers are in globular heads gathered into axillary racemes. The wood, which is called Hawaiian mahogany, is excellent for veneers, and the bark is used for tanning.

86694. CASSIA SURATTENSIS Burm. f. (*C. glauca* Lam.). Caesalpiniaceae.

A tropical leguminous shrub or small tree with pale-green compound leaves and clusters of pale-yellow flowers. Native to the East Indies.

For previous introduction see No. 68847.

86695. STYLONNA THURSTONI (Muell. and Drude) O. F. Cook (*Pritchardia thurstoni* Muell. and Drude). Phoenicaceae. **Palm.**

A tall palm with a slender, ringed trunk crowned by a cluster of spreading fan-shaped leaves 3 to 6 feet in diameter. The clusters of small greenish flowers are borne on long stalks resembling fishing poles. It is native to the Fiji Islands.

86696. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Moscow, Union of Socialistic Soviet Republics. Seeds purchased from the All-Russian Seed Association of Agricultural Cooperatives. Received March 17, 1930.

Collected in the Dzhetysuisk region, Kazar Republic, Semirechenskaia, Turkestan.

86697 to 86699. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Berlin, Germany. Seeds purchased from the German Agricultural Society. Received March 26, 1930.

86697 to 86699—Continued.

86697. *Frankische luzern.*

86698. *Pfalzer luzern.*

86699. *Thuringer luzern.*

86700 to 86706.

From Anam, Indo-China. Seeds presented by M. Poilane. Received March 25, 1930.

86700. AESCHYNOMENE sp. Fabaceae.

86701. BAUHINIA sp. Caesalpiniaceae.

86702. CASSIA sp. Caesalpiniaceae.

86703. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

86704. POUPARTIA AXILLARIS (Roxb.) King and Prain. Anacardiaceae.

A rather common tree at low altitudes in the valleys of western China, growing to a height of 50 to 80 feet and having a trunk often 3 feet in diameter near the base. It has gray bark, massive branches, deciduous leaves, and inconspicuous flowers. The yellow oval fruits, which are about an inch long, are eaten by the Chinese.

For previous introduction see No. 71252.

86705. STRYCHNOS sp. Loganiaceae.

86706. CROTALARIA SPECTABILIS Roth. Fabaceae.

A stout shrub, 3 to 5 feet high, native to India, and sometimes cultivated for the sake of its yellowish purple flowers, which are produced in dense lax racemes often 20 inches in length.

For previous introduction see No. 75877.

86707 to 86718.

From Perth, Western Australia. Seeds presented by Miss Ida W. Richardson. Received March 26, 1930.

86707. ALYOGYNE HAKEAEFOLIA (Giordano) Alefeld (*Fugosia hakeaefolia* Hook.). Malvaceae.

An erect evergreen shrub, native to Australia, with narrow lobed or deeply cut leaves and large purple-lilac flowers. It is closely related to Gossypium.

For previous introduction see No. 79930.

86708. ANIGOZANTHOS MANGLESII D. Don. Amaryllidaceae.

An amaryllidaceous plant native to the Swan River country of southwestern Australia. It bears scorpoid racemes, nearly a foot long, on stout, woolly, bright-red stems. The lustrous green, tomentose flowers, 3 inches long, are tubular in bud, but split nearly to the base on opening, with the tips recurved, and bear the yellow stamens on the curve.

For previous introduction see No. 81671.

86709. BOSSIAEA sp. Fabaceae.

A low shrub with yellow and brown pea-shaped flowers.

86710. CHAMAELAUCIUM UNCINATUM Schauer. Myrtaceae.

An erect bushy heathlike shrub with opposite hook-shaped linear leaves, less than an inch long, and small terminal corymbs of cream-colored flowers. Native to Western Australia.

86707 to 86718—Continued.

86711. CLIANTHUS DAMPIERI A. Cunn. Fabaceae. **Glory pea.**

An Australian semishrubby perennial 2 to 4 feet high with ascending or procumbent branches covered with long soft hairs. The compound leaves are made up of 15 to 21 obovate leaflets an inch long; and the flowers, four to six in pendent racemes, are 3 inches long and crimson or scarlet, with a handsome purple-black spot at the center.

For previous introduction see No. 76863.

86712. EUCALYPTUS FICIFOLIA × CALOPHYLLA. Myrtaceae.

Red flowering gum. A beautiful tree from 15 to 40 feet high, which grows well in sandy soil. The tree has not yet become stabilized, and from the seeds of one tree one may obtain as many as 16 different colors.

86713. HOVEA CHORIZEMAEFOLIA DC. Fabaceae.

A small shrub with prickly toothed leaves and violet flowers. It grows in ironstone soil and blooms in Australia from June through August.

86714. KENNEDIA COCCINEA Vent. Fabaceae.

A handsome trailing or twining woody vine, native to Australia. It has three or five ovate leaflets, and the scarlet flowers are in long-stemmed clusters of 15 to 20.

For previous introduction see No. 75564.

86715. KENNEDIA COMPTONIANA (Andrews) Link (*Hardenbergia comptoniana* Benth.). Fabaceae.

A twining, herbaceous or subshrubby Australian vine with three to five cordate linear to ovate leaflets and long sprays of deep violet-blue flowers.

For previous introduction see No. 77288.

86716. KENNEDIA PROSTRATA R. Br. Fabaceae.

A prostrate pubescent Australian vine with leaves composed of three cordate broadly obovate leaflets an inch long and axillary peduncles bearing two to four scarlet flowers.

For previous introduction see No. 77289.

86717. LABICHEA LANCEOLATA Benth. Fabaceae.

An erect shrub 6 to 10 feet high, native to Western Australia. The shining coriaceous leaves usually have one lanceolate leaflet 2 to 4 inches long, and two very small leaflets at the base of the petiole, but may have all three leaflets nearly the same size. The small yellow flowers are in loose racemes nearly as long as the leaves.

86718. LESCHENAULTIA sp. Goodeniaceae.

This genus, represented by 13 species in Western Australia, contains herbs, undershrubs, and shrubs with scattered or crowded, narrowly linear, heathlike leaves, and terminal clusters of small red, white, blue, or yellow flowers.

86719 to 86741. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

86719 to 86741—Continued.

From Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 26, 1930.

86719 to 86723. Received from the Fukuoka Ken Agricultural Experiment Station, February 24, 1930. Grown as green manure.

86719. No. 3893. *Kurosengoku No. 3.* (Black 500 bushel No. 3.) A small black, oval, slightly flattened bean.

86720. No. 3894. *Koshoku Akidaizu No. 34.* (Yellow fall bean No. 34.) An oval medium-sized yellow bean with large brown hilum.

86721. No. 3895. *Chasengoku No. 81.* (Brown 500 bushel No. 81.) A medium-small, oval, slightly flattened, olive-brown bean.

86722. No. 3896. *Chasengoku No. 9.* (Brown 500 bushel No. 9.) A very small, oval, much flattened, olive-brown bean.

86723. No. 3897. *Chasengoku No. 12.* (Brown 500 bushel No. 12.) A very small, oval, much flattened, olive-brown bean.

86724 to 86736. From the Japanese Imperial Department of Agriculture, Experiment Farm, Konosu, Japan. February 25, 1930. Grown as green manure.

86724. No. 4201. *Yoshoku Akidaizu No. 34.* (Yellow fall bean No. 34.) A medium-sized oval yellow bean, heavily mottled with brown; hilum brown.

86725. No. 4202. *Kurokasudaizu.* (Black cake bean.) A medium-sized, oval, much-flattened black bean with yellow germ; originally from the Nagasaki Prefecture.

86726. No. 4203. *Shiro o yarin.* (Large white ring.) A large oval yellow bean, mottled with brown and black; hilum large and dark brown.

86727. No. 4204. *Kurosengoku Kinai No. 1.* (Black 500 bushel, Kinai No. 1.) A medium-sized oval, much-flattened black bean with yellow germ.

86728. No. 4205. *Miyazaki Akidaizu.* (Miyazaki fall bean.) A medium-small, oval, much-flattened yellow bean, heavily mottled with brown; hilum brown.

86729. No. 4206. *Kurosengoku No. 3.* (Black 500 bushel No. 3.) A medium-sized, oval, much-flattened black bean.

86730. No. 4207. *Chiwata san.* (Chiwata product.) A medium-sized oval yellowish green bean with brown hilum; originally from the Nagasaki Prefecture.

86731. No. 4208. *Enoura san.* (Enoura product.) A medium-sized oval yellow bean, heavily mottled with brown; hilum brown; originally from the Nagasaki Prefecture.

86732. No. 4209. *Kurosengoku Kinai No. 4.* (Black 500 bushel Kinai No. 4.) A medium-small to medium-sized much-flattened oval black bean with yellow germ.

86719 to 86741—Continued.

86733. No. 4210. *Kurosengoku No. 3.* (Black 500 bushel No. 3.) A medium small much-flattened oval black bean.

86734. No. 4211. *Kurosengoku.* (Black 500 bushel.) A medium-small much-flattened oval black bean with yellow germ; originally from the Miyazaki Prefecture.

86735. No. 4212. *Aohi mame.* (Green skin bean.) A medium-small greenish yellow bean, heavily mottled with brown; hilum brown; originally from Taiwan (Formosa).

86736. No. 4213. *Izari mame Kinai No. 1.* (Lame bean, Kinai No. 1.) A medium-small oval much-flattened, yellow bean, heavily mottled with brown.

86737 to 83739. From the Ibaragi Ken Agricultural Experiment Station, Mito, Japan, February 26, 1930.

86737. No. 4222. *Gosha.* A medium sized, slightly flattened, oval yellow bean with light-brown to dark-brown hilum.

86738. No. 4223. *Kimusume Maide No. 1.* A medium-small yellow oval bean with brown hilum.

86739. No. 4224. *Gekka Ibaragi No. 1.* A medium-small oval yellow bean, with hilum varying from light brown to slate black.

86740. No. 4228. *Chuzu.* (Mouse bean.) Heijo, Chosen, February 27, 1930. A mixture of small yellow and greenish yellow varieties, more or less mottled.

86741. No. 4229. *Manshu daizu.* From the T. Asada Miso Factory, Tokyo, Japan, February 28, 1930. A mixture of medium-sized yellow-seeded varieties, grown in southern Manchuria; used in the manufacture of soybean miso.

86742. ALBIZZIA BROWNEI Walp. Mimosaceae.

From Freetown, Sierra Leone, Africa. Seeds presented by the Director of Agriculture. Received March 27, 1930.

A tropical tree up to 30 feet high with bipinnate leaves having shining reticulate ovate to obovate leaflets 1 to 3 inches long. The small flowers, with exserted stamens, are in small heads which are grouped together in broad corymbose racemes 3 to 4 inches long. It is native to tropical Africa.

86743 to 86747. ORYZA SATIVA L. Poaceae. **Rice.**

From Mandalay, Burma, India. Seeds purchased from D. Rhind, Economic Botanist. Received March 28, 1930.

86743. *Emata* A 16–34.

86744. *Letywezin* B 15–1.

86745. *Theikpan Ngayunwa* (15).

86746. *Theikpan Shweat.*

86747. *Theikpan Taungdeikpan.*

86748. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From Sorau N/L, Germany. Seeds presented by the Forschungs Institut. Received March 28, 1930.

Soraner Feinflarks.

86749 and 86750. RHODODENDRON spp. Ericaceae.

From Miyazaki-shi, Japan. Seeds presented by Mr. B. Miyazawa, Phytotechnical Institute, Miyazaki College of Agriculture. Received March 28, 1930.

86749. RHODODENDRON ALBRECHTII Maxim.

A shrub 3 to 5 feet high with obovate to oblanceolate membranous leaves which turn yellow in autumn. The rotate-campanulate, red-purple flowers, 2 inches across, in clusters of three to five, appear with the leaves. It is somewhat like *R. schlippenbachii* and is native to Japan.

For previous introduction see No. 30850.

86750. RHODODENDRON BRACHYCARPUM D. Don. **Fujiyama rhododendron.**

A shrub 10 to 15 feet high with elliptic to oblanceolate leaves 3 to 9 inches long, cuneate to auriculate at the base, dark green and reticulated above, and gray tomentose beneath. The broadly funnelform flowers, about 2 inches across, are white or yellow, striped and flushed pink, and spotted greenish brown. It is native to Japan and Chosen.

For previous introduction see No. 53727.

86751. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Tokyo, Japan. Seeds collected by P. H. Dorsett and W. F. Morse, agricultural explorers, Bureau of Plant Industry. Received March 31, 1930.

No. 3862. *Kuro mame.* A very small, round, black bean with green germ; used for confectionery purposes.

86752 to 86754. OLEA EUROPAEA L. Oleaceae. **Common olive.**

From Marrakech, Morocco. Cuttings collected by Dr. F. T. Bioletti, University of California. Received March 31, 1930.

86752. *Menara.*

86753. *Meslale.* Said to be a fine large pickling olive.

86754. *Zitoum.*

86755. TRIPSACUM LAXUM Nash. Poaceae. **Guatemala grass.**

From Oaxaca, Mexico. Seeds presented by Emil Makrinius. Received March 31, 1930.

A plant found between 900 and 1,200 feet altitude in warm dry situations where it has plenty of light. It grows in clumps which are often 10 to 15 feet high and its stalks are as thick as ordinary corn. The pollenized flowers develop into kernels, arranged in the form of a small ear, which has given the plant the common name of wild corn. The grains, however, do not set in floral bracts, but hang loosely, so that they are easily shaken off. The stalks and leaves of the plant, because of their sweet juice, are much liked by cattle and horses and form a valuable forage when all other grasses are dried up.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 103

Washington, D. C. ▼ Issued March, 1932

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1930 (Nos. 86756–88432)

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INTRODUCTORY STATEMENT

This present inventory of plant material received between April 1 and June 30, 1930 (Nos. 86756–88432), is preeminently a forage-crop and cereal inventory.

The agricultural explorers, P. H. Dorsett and W. J. Morse, were in the Orient during this period and sent in 1,188 introductions, including over 500 strains of soybeans. They found that millet (*Chaetochloa italica*, Nos. 87645–87702) and Japanese millet (*Echinochloa crusgalli edulis*, Nos. 87703–87718) are much used by the Chinese, as well as buckwheat, hemp, rye, and barley. Wheat and corn are also important crops in China, but oats are not much grown. Samples of all these cereals have been sent in. Peas, cowpeas, and all kinds of beans are used for food in northern China as rice is used in Japan. Three Lespedezas (Nos. 88315–88317) are useful both as forage and as ornamentals. Native varieties of cotton (*Gossypium hirsutum*, Nos. 87736 and 87737, and *G. nanking*, Nos. 87738–87742) were collected by them in Chosen.

For the help of specialists who are working to improve rice (*Oryza sativa*) in this country there were received through F. A. McClure 13 strains (Nos. 87124–87137) from C. H. Heh, head of the Department of Agronomy, College of Agriculture and Forestry, Nanking, China, and 22 strains (Nos. 87408–87430) from Koo Kwai Fan, in charge of farm crops, Lingnan University, Canton, China; also two strains (Nos. 87478 and 87479) from Rev. William Harris, The Prince Royal's College, Chiengmai, Siam, and 11 strains (Nos. 88331–88342) from S. G. Sharngapani, Economic Botanist of the Government of Bengal, Dacca, Bengal, India, also 145 strains (Nos. 87107–87113, 87201–87280, 87845–87905) sent in by the department explorers, Messrs. Dorsett and Morse.

H. L. Westover during this time was traveling through Europe in search of alfalfas and sent in 21 strains (*Medicago satira*, Nos. 86767–86776, 86786 and 86787, 87390–87392, 87483–87488), besides seeds of melons, wheat, and corn.

H. N. Vinall sent from Porto Rico and Cuba cover and forage crops (Nos. 87462–87465, 88185–88188) to be tested in this country.

For the use of department specialists working to improve the potato (*Solanum tuberosum*), tubers were received from Ayr, Scotland (Nos. 87470–87473, 87481 and 87482), from the Plant Breeding Station, Moscow, Union of Socialistic Soviet Republics (Nos. 88189–88193), and from Peru (Nos. 86777–86781).

David Fairchild sent from Italy scions of two varieties of orange (*Citrus sinensis*, Nos. 88418 and 88419), one of which may be left on the tree a year and still retain its juiciness.

Dr. H. S. Fawcett sent scions of *Citrus aurantifolia* (No. 86833), *C. nobilis deliciosa* (No. 87401), and *C. aurantium* (No. 87431) from Cairo, Egypt.

Through Prof. Frederic F. Bioletti, of the University of California, Mr. Thauvin, Inspector of Agriculture, Mekinez, Morocco, Africa, presented cuttings of olives (*Olea europaea*, Nos. 87439–87445).

From the Forest Experiment Station at Sukhoun, Caucasus, Union of Socialistic Soviet Republics, were received seeds of wild almonds, peaches, pistache, apricots, plums, and pomegranates (Nos. 88094–88103) collected in the Kopet Dag Mountains. These will be used in the plant-breeding work by the department specialists.

T. A. Fennell, in a visit to the Harvard Botanic Garden at Soledad, Cienfuegos, Cuba, found many trees and ornamentals not commonly grown in the United States, and sent seeds and cuttings (Nos. 87497–87519, 88105–88139).

From Dr. A. W. Hill, Director of the Royal Botanic Gardens, Kew, England, a shipment of ornamentals (*Rhododendron* spp., Nos. 86758–86763) and lilacs (*Syringa* spp., Nos. 86764–86766) was received.

The return to favor of the old-fashioned rock garden has created a demand for ornamentals that can be used to advantage in such situations. A shipment of *Kalanchoe* spp. (Nos. 86824–86828), from the Director of the Botanic Garden, Stockholm, Sweden, will be grown for this purpose.

For the help of specialists who are working with rubber-producing plants, seeds have been received from the Botanic Garden, Eala, Belgian Congo (Nos. 87385–87387), from Fort Dauphin, Madagascar (No. 87384), and from Hope Gardens, Jamaica (No. 88372).

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., June 19, 1931.

INVENTORY[1]

86756 to 86766.

From England. Seeds presented by Dr. A. W. Hill, Director, Royal Botanic Gardens, Kew. Received April 1, 1930.

86756. ONONIS BIFLORA Desf. Fabaceae.

A leguminous plant with trifoliolate leaves having oblong serrate leaflets and longitudinally striped yellow flowers borne in pairs. It is native to southern Europe.

86757. ONONIS RECLINATA L. Fabaceae.

An upright or sometimes prostrate branched annual, up to 10 inches high, with small trifoliolate leaves and small purplish flowers. Native to dry sandy situations, especially along the coast in the Mediterranean regions.

86758 to 86763. RHODODENDRON spp. Ericaceae.

86758. RHODODENDRON AMBIGUUM Hemsl.

A low Chinese evergreen species with lanceolate leaves 2 to 3 inches long, and flowers, pale yellow spotted with greenish yellow, 2 inches across.

For previous introduction see No. 77015.

86759. RHODODENDRON DECORUM Franch.

A western Chinese evergreen species with glabrous leaves, glaucous beneath, and broadly bell-shaped white or pink flowers 2 inches across.

For previous introduction see No. 79041.

86760. RHODODENDRON DISCOLOR Franch.

A tall evergreen shrub 15 to 20 feet high with yellowish branchlets, elliptic to lanceolate glabrous leaves, dark green above and whitish beneath. The white to pale-pink funnelform-campanulate flowers are 2 to 3 inches across. The shrub is native to central China.

86756 to 86766—Continued.

86761. RHODODENDRON RACEMOSUM Franch. **Mayflower rhododendron.**

An upright Chinese shrub up to 6 feet high, with scaly branchlets, elliptic to obovate leaves which are glabrous above and glaucous beneath, and few-flowered clusters of pink flowers, so abundantly produced as to completely cover the plant.

For previous introduction see No. 77018.

86762. RHODODENDRON RUBIGINOSUM Franch.

A rigid evergreen shrub about 3 feet high with ovate to lanceolate leaves 2 to 3 inches long and densely covered with brownish red scales beneath. The broadly funnelform bright rose-red flowers, 1 to 2 inches across, are in few-flowered clusters. It is native to central China.

86763. RHODODENDRON CONCINNUM Hemsl.

A western Chinese shrub about 10 feet high, with oval-elliptic leaves and small clusters of purple, sometimes white, funnel-shaped flowers.

For previous introduction see No. 66603.

86764 to 86766. SYRINGA spp. Oleaceae. **Lilac.**

86764. SYRINGA PALIBINIANA Nakai.

A shrub native to Chosen, about 10 feet high, with slender upright branches, elliptic leaves 1 to 3 inches long, and loose panicles of pale-lilac or whitish flowers.

For previous introduction see No. 76600.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

86756 to 86766—Continued.

86765. SYRINGA PINETORUM W. W. Smith.

A shrub related to *S. microphylla*, about 10 feet high with densely pilose branchlets, ovate to ovate-lanceolate leaves 2 to 4 inches long, and purplish flowers in panicles about 9 inches long. It is native to southwestern China.

For previous introduction see No. 79050.

86766. SYRINGA TOMENTELLA Bureau and Franch. **Felty lilac.**

A recently introduced bushy shrub similar to *S. wilsonii*, about 10 feet high, with elliptic leaves which are hairy beneath, and long-branched spikes of fine mauve-pink flowers. This shrub is native to western China.

For previous introduction see No. 78159.

86767. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Valence-sur-Rhone, France. Seeds presented by Tezier Freres, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received April 2, 1930.

Luzerne.

86768 to 86776. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Prague, Czechoslovakia. Seeds presented by the Kooperativa, Einkautsverhand der Landwirtschaftl, Genossenschaften, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received April 2, 1930.

Received in separate packets, but without notes.

86777 and 86778. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Lima, Peru. Tubers presented by Ralph H. Gray. Received April 2, 1930.

Tubers of yellow-fleshed potatoes, indigenous to Peru.

86777. From Canta, Peru.

86778. From Tarma, Peru.

86779 to 86781. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Huancayo, Peru. Tubers purchased from Paul Ledig. Received April 2, 1930.

Tubers of yellow-fleshed potatoes, indigenous to Peru.

86779. *Chaucha.*

86780.

86781.

86782. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Warsaw, Poland. Seeds purchased from W. W. Musareot. Received April 3, 1930.

Variety *Gloria.*

86783 to 86785. CYCLAMEN spp. Primulaceae.

From Leicester, England. Seeds purchased from Rev. J. Farnworth Anderson. Received April 4, 1930.

86783. CYCLAMEN EUROPAEUM L. **European cyclamen.**

A low more or less evergreen European perennial with a tuberous root, rounded or kidney-shaped leaves, white marbled above and purplish beneath, and fragrant bright-red flowers on scapes 4 or 5 inches high in autumn.

For previous introduction see No. 79192.

86784 and 86785. CYCLAMEN NEAPOLITANUM Tenore. **Neapolitan cyclamen.**

A low perennial 3 inches high, arising from a large black tuber. The deep pink or rarely white flowers are borne in autumn. Native to Italy.

For previous introduction see No. 79055.

86784. Variety *album*. A white form.

86785. A pink form.

86786 to 86789.

From Bucharest, Rumania. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received April 5, 1930.

86786 and 86787. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

86786. From the Government farm, Calarasi, southwestern Rumania.

86787. From the Government farm, Domnita, near the city of Braila on the Danube River.

86788 and 86789. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

86788. From the Government farm, Trestiana, near Jassy, northern Rumania.

86789. From the Government farm, Dobrovat, near Vaslui, northern Rumania.

86790 to 86822.

From the Union of Socialistic Soviet Republics. Seeds and scions presented by V. Viatkin, Government Botanical Garden, Nikita, Yalta, Crimea. Received April 5, 1930.

86790 to 86818. FICUS CARICA L. Moraceae. **Common fig.**

Scions.

86790. No. 12. ***Belle dame Blanche.***

86791. No. 13. ***Belle dure.***

86792. No. 22. ***Bianco grosso.***

86793. No. 16. ***Bleuet.***

86794. No. 4. ***Bourjasotte.***

86795. No. 21. ***Bourjasotte noire.***

86796. No. 17. ***Brojiotto.***

86797. No. —. ***Datte de Naple.***

86798. No. 25. ***Davlett Casi.***

86799. No. 14. ***Di Dalmatic.***

86800. No. 15. ***Di Smyrne.***

86790 to 86822—Continued.

86801. No. 11. *Early Gray.*

86802. No. 5. *Erifere.*

86803. No. 7. *Figue jaune* (Caprificus).

86804. No. —. *Figue noire.*

86805. No. 6. *Figue rouge.*

86806. No. 20. *Grise Madeleine.*

86807. No. 9. *Grosse grise bif.*

86808. No. 19. *Hoileuse blanche*

86809. No. 8. *Lardare.*

86810. No. 1. *Moisoniere.*

86811. No. 26. *Stambul.*

86812. No. 23. *Violette de la frette.*

86813. No. 18. *Violette delicatissima.*

86814 to 86822. PISTACIA spp. Anacardiaceae.

86814 to 86816. PISTACIA MUTICA Fisch. and Mey. **Terebinth.**

86814. Scions from a staminate tree.

86815. Scions from a pistillate tree.

86816. Seeds.

86817 to 86822. PISTACIA VERA L. **Pistache.**

86817 and 86818. Scions.

86819 to 86822. Seeds.

86823. PITHECOLLOBIUM SUBCORIACEUM Thwaites. Mimosaceae.

From Hakgala, Ceylon. Seeds presented by J. J. Nock, Curator, Botanic Garden. Received April 7, 1930.

A tropical tree 30 to 40 feet high with densely pubescent brown branchlets and bipinnate leaves made up of rigidly coriaceous trapezoid leaflets less than half an inch long, glossy above and densely pubescent below. The small brownish flowers with long stamens are in many-flowered heads an inch in diameter, and the twisted, coriaceous pods are 3 to 4 inches long. It is native to India and Ceylon.

For previous introduction see No. 67937.

86824 to 86828. KALANCHOE spp. Crassulaceae.

From Stockholm, Sweden. Seeds presented by the director, Botanic Garden. Received April 3, 1930.

86824. KALANCHOE CRENATA Haw.

A succulent perennial native to tropical Africa, 2 to 6 feet high, with a thick fibrous root, oblong or roundish oval crenate leaves about 2 inches long, and bright-yellow flowers, half an inch long, in terminal and axillary cymes.

For previous introduction see No. 79477.

86825. KALANCHOE ROTUNDIFOLIA Haw.

A succulent perennial 1 to 3 feet high with a slender stem which has a few leaves at the base and is naked above. The fleshy leaves, 1 to 2 inches long, vary in shape from broadly obovate to spatulate, and are entire or crenate. The small orange or yellow flowers are borne in flat-topped panicles. Native to South Africa.

86824 to 86828—Continued.

For previous introduction see No. 86235.

86826. KALANCHOE SCHUMACHERI Koord.

An erect or ascending succulent, 1 to 2 feet high, with oblanceolate doubly serrate leaves 5 to 8 inches long, and axillary and terminal cymes of yellow flowers. It is native to Java.

86827. KALANCHOE SPATHULATA DC.

A succulent perennial 1 to 4 feet high with the lower leaves spatulate oblong, crenate, 3 to 10 inches long, and the upper leaves, 3 to 4 inches long, very narrow and sometimes trifoliolate. The clear yellow flowers are in flattish corymbs. Native to tropical Asia.

For previous introduction see No. 86236.

86828. KALANCHOE WELWITSCHII Britten.

An erect succulent plant, native to tropical Africa, with cylindrical stems 3 to 5 feet high and an inch in diameter at the base. The large ovate-lanceolate basal leaves are 8 to 10 inches long and crenate-dentate with purple-margined teeth. The upper leaves are linear-lanceolate and nearly entire. The bright sulphur-yellow flowers, about an inch long, are borne in diffuse panicles.

86829. RUBUS ULMIFOLIUS Schott. Rosaceae. **Elmleaf blackberry.**

From Brignoles, France. Seeds presented by Dr. R. Salgues, The Salygues Foundation. Received April 8, 1930.

A blackberry with curving, prostrate canes armed with straight prickles. The compound leaves are made up of 3 or 5 coriaceous, evergreen, obovate or orbicular, sharply serrate leaflets, and the medium-sized red flowers are sometimes double. It is native to Europe.

For previous introduction see No. 50401.

86830 and 86831.

From Haiti. Seeds obtained through O. F. Cook, Bureau of Plant Industry, United States Department of Agriculture. Received April 8, 1930.

86830. FUNTUMIA ELASTICA (Preuss) Stapf. Euphorbiaceae. **Lagos rubbertree.**

A large forest tree which is very widely distributed throughout central Africa and is the source of Lagos rubber, which is of excellent quality.

For previous introduction see No. 77393.

86831. HEVEA BRASILIENSIS (H. B. K.) Muell. Arg. Euphorbiaceae. **Para rubbertree.**

A tropical Brazilian tree now extensively cultivated for rubber.

For previous introduction see No. 77394.

86832. VITIS VINIFERA L. Vitaceae. **European grape.**

From Urumiah, Persia. Scions presented by Jalil K. Hashimzade, American Agricultural School. Received April 9, 1930.

86833. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae.
Lime.

From Cairo, Egypt. Scions collected by Dr. H. S. Fawcett, University of California. Received April 11, 1930.

No. 89. *Beledi* lime. The best type used in Egypt and preferred to lemons. It seems to be somewhat similar to the West Indian limes, but grows more in the form of trees.

86834. VITIS VINIFERA L. Vitaceae.
European grape.

From Tokyo, Japan. Cuttings received from the Agricultural Experiment Station, Kofu City, Yamanashi Ken, through P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 10, 1930.

A grape which is supposed to be able to withstand a considerable amount of rainfall and for this reason should be of interest in the southern United States.

86835 to 86871. CUCUMIS MELO L. Cucurbitaceae.
Melon.

From Leningrad, Union of Socialistic Soviet Republics. Seeds presented by the Institute of Applied Botany. Received April 12, 1930.

86835 to 86842. Variety *Agrestis*.

86835. No. 680–a.
86836. No. 1499.
86837. No. 2242.
86838. No. 2245.
86839. No. 2302.
86840. No. 2307.
86841. No. 2344.
86842. No. 2346.

86843 to 86847. Variety *Ameri*.

86843. No. 920/46.
86844. No. 953.
86845. No. 1206/3.
86846. No. 1213.
86847. No. 3054.

86848 and 86849. Variety *Cassaba*.

86848. No. 1618.
86849. No. 1825.

86850. No. 928. Variety *Khandaliaki*.

86851. No. 1396. Variety *Zard*.

86852. No. 1374/4.

86853 to 86859. Variety *Agrestis*.

86853. No. D–680–a.
86854. No. D–1499.
86855. No. D–2242.
86856. No. D–2245.
86857. No. D–2302.
86858. No. D–2307.
86859. No. D–2344.

86860 to 86865. Variety *Ameri*.

86860. No. D–1150.
86861. No. D–1206. *Schakhar-palak*.
86862. No. D–953. *Arbakeshi*.
86863. No. D–1213. *Ak-uruk*.
86864. No. D–3054. *Koy-bash*.
86865. No. D–920. *Tch-Kizil*.

86866. No. D–1618. Variety *Cassaba*.

86867. No. 1020. Variety *Khandaliaki*.

86868. No. D–928. Variety *Khandaliaki* "Bokharka."

86835 to 86871—Continued.

86869. No. D–1396. Variety *Zard*.

86870. No. D–533.

86871. No. D–917.

86872 and **86873.** CASTANEA MOLLISSIMA Blume. Fagaceae.
Hairy chestnut.

From Tokyo, Japan. Seeds purchased by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, at the request of R. Kent Beattie. Received April 16, 1930.

For previous introduction see No. 78831.

86874. ARDISIA CRENULATA Lodd. Myrsinaceae.

From Hawaii. Seeds presented by Harold L. Lyon, in charge, department of botany and forestry, Hawaiian Sugar Planters' Association, Honolulu. Received April 16, 1930.

A tropical evergreen shrub with oblong wavy-margined leaves, terminal panicles of sweet-scented white flowers, and drooping clusters of persistent coral-red fruits. It is native to China.

86875. BERCHEMIA RACEMOSA Sieb. and Zucc. Rhamnaceae.
Japanese supplejack.

From Karuigawa, Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received September 3, 1929. Numbered in April, 1930.

No. 823. A deciduous twining shrub with ovate leaves 1 to 3 inches long, and large terminal panicles of greenish flowers followed by small ellipsoidal berries which are first red and later change to black. It is native to Japan.

For previous introduction see No. 63341.

86876 to 87084. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae.
Soybean.

From Japan and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 12, 1930.

86876 to 86878. From Japan.

86876. No. 4249. *Daizu pikuanda*, Okinawa Ken Agricultural Experiment Station, Nawa, March 10, 1930. A medium-sized, oval, light-yellow bean with dark-brown hilum. Plant used as a green manure.

86877. No. 4251. *Joshin shiro*. From the Mikawaya Miso Co., Tokyo, March 10, 1930. A medium-sized, oval, glossy, yellow bean with pale hilum; grown in northeastern Chosen and found to be especially valuable in making white miso.

86878. No. 4255. From the Yama Masa Shoyu Sauce Factory, Nakano-Nachi, Tokyo, February 28, 1930. A mixed sample of medium-sized yellow beans, most of which have brown hilums; grown in Manchuria and used in the manufacture of soy sauce.

86876 to 87084—Continued.

86879 to 86896. From Keikido Ken, Chosen, through the Bureau of Industry, Government General, Keijo, Chosen, March 10, 1930.

86879. No. 4401. *Chantapaku.* A medium-sized, oval, deep glossy yellow bean with pale hilum.

86880. No. 4402. *Rensen chame* (Rensen browneye). Medium-sized, oval, light-yellow bean with brown hilum.

86881. No. 4403. *Oribikon.* Large, oval, glossy yellow beans with the testa split on nearly all of them; hilum very light brown.

86882. No. 4404. *Bote.* A medium-sized, oval, light-yellow bean with brown hilum.

86883. No. 4405. *Tansen.* A medium-sized, oval, glossy, yellow bean with pale hilum.

86884. No. 4406. *Purutekon.* A medium-sized, nearly round, deep glossy green bean with brown hilum and green germ.

86885. No. 4407. *Purutekon.* A medium-large, oval, yellowish-green bean with pale hilum and yellow germ.

86886. No. 4408. *Teizokon* A medium-large, oval, dark-brown bean.

86887. No. 4409. *Komujonkon.* A medium-sized, oval, much-flattened, glossy, black bean with yellow germ.

86888. No. 4410. *Menukon* (hawk eye). A medium-sized oval, slightly flattened, brown bean marked with concentric black rings.

86889. No. 4411. *Pimazakon.* A large, oval, slightly flattened, black bean with fine network of white on the sides and a yellow germ.

86890. No. 4412. *Senbikon* (saddle). A medium-large, much flattened, yellowish-green bean with black saddle and green germ.

86891. No. 4413. *Orabikon* (black-eye). A medium-sized, oval, glossy yellow bean with slate-black hilum.

86892. No. 4414. *Purukomukon.* A medium-large, oval, glossy, bluish-green bean with pale hilum.

86893. No. 4415. *Chukon* (white mouth). A small, round, yellow bean with brown hilum; it should be an excellent variety for sprouts.

86894. No. 4416. *Chukon.* Medium-small, oval, glossy, black bean very similar to *Ebony* (No. 17254).

86895. No. 4417. *Chukon* (green mouth). A medium-small, nearly round, glossy, green bean with light-brown hilum; it may be of value for sprouts.

86896. No. 4418. *Chukon* (black-green mouth). A small, round, glossy, bluish-green bean with black hilum and yellow germ.

86897 to 86916. From Chusei Hokudo, Chosen, through the Bureau of Industry, Government General, Keijo, March 10, 1930.

86897. No. 4419. *Jirumukon.* A medium-small, nearly round bean with a pale hilum; may be of value for sprouts.

86898. No. 4420. *Hintangukon.* A medium sized, oval, yellow bean with russet-brown hilum.

86899. No. 4421. *Chachuto.* A medium-small, nearly round, brown bean.

86900. No. 4422. *Kimenta.* A medium-sized, oval, glossy, deep-yellow bean, slightly mottled with brown; hilum large and dark brown.

86901. No. 4423. *Azukuribangukon.* A medium-large, oval, slightly flattened brown bean with the testa split into fine network of white on the sides.

86902. No. 4424. *Burukunbankon.* A medium-sized, oval, yellowish-brown bean.

86903. No. 4425. *Pakumeta* (white eye). A medium-sized oval, glossy, yellow bean with pale hilum.

86904. No. 4426. *Fukota.* A medium-large, oval, glossy, yellow bean with large brown hilum.

86905. No. 4427. *Pizu.* A medium small, nearly round, dark-brown bean.

86906. No. 4428. *Chumokute.* A very small, round, glossy, black bean with yellow germ.

86907. No. 4429. *Chongukon.* A large, oval, slightly flattened, yellowish-green bean, mottled with black; hilum black.

86908. No. 4430. *Kujongumurukon.* A medium-large, oval, bluish-green bean with blue-black hilum.

86909. No. 4431. *Purukon.* A large, oval, green bean with brown hilum and green germ.

86910. No. 4432. *Jongukurukon.* A medium-small, oval, slightly flattened, green bean with brown hilum and yellow germ.

86911. No. 4433. *Jindarinkon.* A medium-small, oval, black bean; very similar to *Ebony* (No. 17254).

86912. No. 4434. *Chorante.* A medium-sized, oval, slightly flattened brown bean marked with concentric black rings. Very similar to *Meyer* (No. 17852).

86913. No. 4435. *Komubangukon.* A medium-sized, oval, slightly flattened, glossy black bean with yellow germ.

86914. No. 4436. *Judaizu.* A medium-large, oval, green bean slightly mottled with brown; hilum brown; testa more or less split.

86915. No. 4437. *Chuhokuhoku.* A large, oval yellow bean with russet-brown hilum.

86916. No. 4438. *Chuhokuko.* A medium-sized, oval, glossy, deep-yellow bean with pale hilum.

86917 to 86923. From Zenra Nando, Chosen, through the Bureau of Industry, Government General, Keijo, March 10, 1930.

86917. No. 4439. *Purukon.* A medium-sized, oval, olive-green bean mottled with black.

86876 to 87084—Continued.

86918. No. 4440. *Hinbatsukon.* A large oval, glossy, greenish-yellow bean slightly mottled with brown; hilum brown.

86919. No. 4441. *Hinkon.* A medium-sized, oval, glossy, yellow bean slightly mottled with brown; hilum pale.

86920. No. 4442. *Pakute.* A medium-sized, oval, glossy, yellow bean with pale hilum.

86921. No. 4443. *Purukon.* A small, oval, light-green bean, marbled with brown; hilum brown.

86922. No. 4444. *Orikon.* A medium-small, oval, yellow bean, marbled with brown; hilum brown.

86923. No. 4445. *Norangukon.* A large, oval, slightly flattened brown bean with the testa more or less split.

86924 to 86965. From Chusei Nando, Chosen, through the Bureau of Industry, Government General, Keijo, March 10, 1930.

86924. No. 4446. *White bangukon.* A large, oval, glossy, yellow bean with large black hilum.

86925. No. 4447. *Azukoribangukon.* A medium-large, oval, slightly flattened black bean with yellow germ and having the testa split into white network.

86926. No. 4448. *Buongukon.* A medium-large, oval, glossy, yellow bean with pale to light-brown hilum.

86927. No. 4449. *Ojintei.* A medium-small, oval, glossy, deep-yellow bean with long, brown hilum.

86928. No. 4450. *Kongunamurakon.* A very small, round, glossy, yellow bean with pale hilum; should be an excellent variety for sprouts.

86929. No. 4451. *Black bangukon.* A medium-large, oval, slightly flattened black bean, with the testa on the sides split into a coarse network of white.

86930. No. 4452. *Red bangukon.* A medium-large, oval, slightly flattened glossy brown bean.

86931. No. 4453. *White zongukon.* A medium-sized, oval, light-yellow bean slightly mottled with brown; hilum brown.

86932. No. 4454. *Green bangukon.* A medium-large, nearly round, glossy, deep-green bean with black hilum and green germ.

86933. No. 4455. *Green zongukon.* A medium-sized, oval, glossy, green bean with brown hilum and green germ.

86934. No. 4456. *Purple bangukon.* A medium-large, nearly round, bluish-green bean with yellow germ.

86935. No. 4457. *Kuchougumurubangukon.* A medium-sized, oval, bluish-green bean with yellow germ.

86936. No. 4458. *Rokugatsuta.* A medium-sized, oval, glossy, yellow bean with pale hilum.

86937. No. 4459. *Jukon.* A medium-small, oval, black bean with yellow germ.

86876 to 87084—Continued.

86938. No. 4460. *Agudarikon.* A medium-large, oval, glossy, brown bean.

86939. No. 4461. *Tansen daizu.* A medium-sized, oval, light-yellow bean slightly mottled with brown; hilum pale to light brown.

86940. No. 4462. *Bangukon.* A medium-sized, oval, glossy, brown bean.

86941. No. 4463. *Azukarikon.* Medium-large, oval, slightly flattened, black beans, with the testa on the sides more or less split into coarse white network.

86942. No. 4464. *Kikkota.* A very large, oval, light-yellow bean with a pale hilum and the testa more or less split.

86943. No. 4465. *Uobangukon.* A large, oval, glossy, yellow bean with rather large black hilum.

86944. No. 4466. *Tezobankon.* A medium-sized, brown bean with yellow germ.

86945. No. 4467. *Chimokuta.* A small, round, glossy, black bean with yellow germ.

86946. No. 4468. *Orialbankon.* A medium-sized, oval, yellow bean slightly mottled with brown; hilum pale.

86947. No. 4469. *Chiarumuribankon.* A medium-sized, oval, dark olive-brown bean with yellow germ.

86948. No. 4470. *Sonbibankon.* A medium-large, oval, much flattened, yellowish-green bean with a black saddle.

86949. No. 4471. *Kuongukon.* A medium-sized, oval, brown bean marked with concentric black rings.

86950. No. 4472. *Kuchongumurubankon.* A medium-large, oval glossy, dark-olive bean with yellow germ.

86951. No. 4473. *Kuonguarubankon.* A medium-sized, oval glossy, black and brown bean.

86952. No. 4474. *Honbibankon.* A large yellow, oval bean with pale hilum and the testa split on most seed.

86953. No. 4475. *Yongutebaku.* A medium-sized, oval, light-yellow bean with brown hilum.

86954. No. 4476. *Jimtan zongukon.* A small, round, cinnamon-brown bean, very similar to *Brownie* (No. 17256).

86955. No. 4477. *Puruchumokuta.* A medium-small, nearly round, green bean with brown hilum and green germ.

86956. No. 4478. *Searuzonkon.* A medium-sized, nearly round, glossy, black and brown bean.

86957. No. 4479. *Azukaribankon.* A medium-large, oval, slightly flattened, black bean with the testa on both sides split into fine network of white.

86958. No. 4480. *Nujinzongukon.* A medium-small, oval, light-yellow bean mottled with brown; hilum brown.

86959. No. 4481. *Chantadaizu.* A medium-sized, oval, glossy, yellow bean with light-brown hilum.

86876 to 87084—Continued.

86960. No. 4482. *Anzurubansongukon.* A medium-large, oval, yellow bean with large, russet-brown hilum.

86961. No. 4483. *Searubankon.* A medium-sized, oval, slightly flattened brown bean marked with black concentric rings.

86962. No. 4484. *Batoribankon.* A medium-sized, oval, glossy, olive-brown bean.

86963. No. 4485. *Urungubankon.* A medium-large, oval, bluish-green bean.

86964. No. 4486. *Satorubankon.* A large, oval, glossy, olive-brown bean.

86965. No. 4487. A medium-sized, oval, slightly flattened black bean with yellow germ.

86966 to 86985. From Zenra Hokudo. Received through the Bureau of Industry, Government General, Keijo, Chosen, March 10, 1930.

86966. No. 4488. *Zomukon.* A medium-sized, oval, light-yellow bean with pale hilum.

86967. No. 4489. *Kogendokomujon.* A mixture of black-seeded varieties ranging from medium small to large, with yellow germ.

86968. No. 4490. *Kongunanmurakon.* A mixture of small-seeded yellow varieties which may be of value for sprouts.

86969. No. 4491. *Bamumitsukon.* A large, oval, black bean with the testa split into coarse network of white; germ yellow.

86970. No. 4492. *Pakute.* A medium-sized, oval, light-yellow bean with light-brown hilum.

86971. No. 4493. *Rokudaizu.* A large, oval, yellowish-green bean slightly mottled with brown; hilum large and brown.

86972. No. 4494. *Pakute.* A medium-sized, oval, glossy, yellow bean slightly mottled with brown; hilum pale.

86973. No. 4495. *Rokukon.* A small, oval, glossy, green bean slightly mottled with brown; hilum brown, germ green.

86974. No. 4496. *Moyashimame.* A medium small, oval, slightly flattened bean mottled with brown; hilum brown.

86975. No. 4497. *Hinjunnunkon.* A very small, oval, yellow bean with a brown hilum which should be an excellent variety for sprouts.

86976. No. 4498. *Komongukon.* A medium-sized, oval, slightly flattened black bean with yellow germ.

86977. No. 4499. *Purunkon.* A medium-small, oval, green bean slightly mottled with brown; hilum brown; germ green.

86978. No. 4500. *Zongukon.* A medium-sized, oval, slightly flattened, light-yellow bean with brown hilum.

86979. No. 4601. *Kinzanshu.* A medium-small, oval, light-yellow bean, slightly mottled with brown; hilum pale.

86876 to 87084—Continued.

86980. No. 4602. *Purumtari.* A medium-sized, oval, glossy, yellow bean with pale hilum.

86981. No. 4603. *Rokugatsuzu.* A large, oval, glossy, yellow bean with pale hilum.

86982. No. 4604. *Kogendokon.* A mixture of medium-sized, yellow varieties mottled with brown.

86983. No. 4605. *Kogendoshokuta.* A mixture of yellow-seeded varieties, ranging in size from small to very large.

86984. No. 4606. *Togomazu* (castor-oil bean). A large, oval, slightly flattened black bean with the testa split into coarse white network.

86985. No. 4607. *Chumokutaza.* A medium-small, nearly round, glossy, black bean with yellow germ.

86986. No. 4608. *Betsukon.* From Zenra Nando. Medium-sized, oval, yellow beans with pale to dark-brown hilums.

86987. No. 4609. *Shota.* From Zenra Hokudo. A medium-sized, oval, yellow bean with brown hilum.

86988. No. 4610. *Dairyu shu.* From Zenra Nando. A very large, oval, yellow bean; hilum brown and testa slightly split.

86989 to 86992. From Zenra Hokudo.

86989. No. 4611. *Burukon.* A medium-sized, oval, yellow bean slightly mottled with brown; hilum brown.

86990. No. 4612. *Orukon.* A medium-sized, oval, light-yellow bean with brown hilum.

86991. No. 4613. *Chantan.* A medium-large, oval, glossy, yellow bean with pale hilum.

86992. No. 4614. *Ekizan.* A medium-sized, oval, glossy, yellow bean with pale hilum.

86993 to 87034. From Keisho Hokudo.

86993. No. 4615. *Pakute.* From the Tasumen. A medium-sized, oval, yellow bean with brown hilum.

86994. No. 4616. *Purute.* From Kaizanmen. A medium-sized, oval, slightly flattened, yellowish-green bean with slate-black hilum.

86995. No. 4617. *Orukongu.* From Zunimen. A medium-sized, oval, slightly flattened, light-yellow bean with pale hilum.

86996. No. 4618. *Orukongu.* From Koromen. A medium-sized, oval, glossy, yellow bean with brown hilum.

86997. No. 4619. *Kota.* From Gikomen. A medium-sized, oval, green bean with brown hilum and green germ.

86998. No. 4620. *Orukongu.* From Shunzanmen. A medium-sized, oval, light-yellow bean with brown hilum.

86999. No. 4621. *Orukongu.* From Hasenmen. A medium-sized, oval, glossy, yellow bean with light russet-brown hilum.

87000. No. 4622. *Ogonta.* From the Shinhomen. A medium-sized, oval, light-yellow bean with brown hilum.

86876 to 87084—Continued.

87001. No. 4623. *Tonguteki.* From Kentomen. A medium-large, oval, glossy, yellow bean with the testa more or less split.

87002. No. 4624. *Ogonta.* From Seikimen. A large, oval, yellow bean with light-brown hilum.

87003. No. 4625. *Ikkota.* From Seikimen. A very large, oval, yellow bean with a pale hilum and the testa slightly split.

87004. No. 4626. *Pakushuta.* From Seikimen. A medium-sized, oval, yellow bean with brown hilum.

87005. No. 4627. *Hinkon.* From Datoknmen. A medium-sized, oval, yellow bean with long, brown hilum.

87006. No. 4628. *Buyotori.* From Tatsuzanmen. A mixture of large, oval, glossy, yellow beans with black or brown hilums.

87007. No. 4629. *Kurukongu.* From Heikokumen. A medium-sized, oval, glossy, brown bean.

87008. No. 4630. *Ogonta.* From Neikaimen. A medium-large, oval, yellow bean with large, dark-brown hilum.

87009. No. 4631. *Zebiburukongu.* From Uhomen. A very large, oval, slightly flattened, black bean with the testa split in white network on the sides.

87010. No. 4632. *Techoburukongu.* From Shoramen. A medium-small, nearly round, glossy, brown bean.

87011. No. 4633. *Orukongu.* From Kikeimen. A medium-sized, oval, light-yellow bean with brown hilum.

87012. No. 4634. *Hinkongu.* From Shoramen, Hokado. A very large, oval, yellow bean with the testa slightly split and the hilum pale.

87013. No. 4635. *Hingukongu.* From Kotomen. A medium-sized, nearly round, deep glossy yellow bean, slightly mottled with brown; hilum brown.

87014. No. 4636. *Hingukongu.* From Gaitomen. A large, oval, glossy, yellow bean with pale hilum.

87015. No. 4637. *Ikkota.* A mixture of yellow-seeded varieties from the Shimmeimen.

87016. No. 4638. *Hinyuntari.* From Eisenmen. A medium-sized, oval, slightly flattened, light-yellow bean with pale hilum.

87017. No. 4639. *Chongute.* From Sanyomen. A large, oval, green bean with black hilum and green germ.

87018. No. 4640. *Oseita.* From Sanyomen. A medium-large, oval, glossy, light-yellow bean with pale hilum.

87019. No. 4641. *Hakushokudaizu.* A mixture of yellow-seeded varieties from the Rynganmen.

87020. No. 4642. *Hinjuntari.* From Toromen. A large, oval, glossy, yellow bean with pale-brown hilum.

87021. No. 4643. *Buyotari.* From Kaineimen. A medium-small, oval, slightly flattened, light-yellow bean slightly mottled with brown; hilum russet brown.

87022. No. 4644. *Hingukon.* From Kotenmen. A mixture of yellow-seeded varieties.

87023. No. 4645. *Hingukongu.* From Hosenmen. A mixture of yellow-seeded varieties.

87024. No. 4646. *Ogonta.* From the Jorimen. A large, oval, slightly flattened, yellow bean with brown hilum.

87025. No. 4647. *Totto tari.* From the Jorimen. A medium-large, oval, green bean with brown hilum and green germ.

87026. No. 4648. *Hinkongu.* From Fumonmen. A medium-large, glossy, yellow bean with pale hilum.

87027 to 87029. From Kaihomen.

87027. No. 4649. *Chirugumukongu.* A small, oval, slightly flattened, cloudy yellow bean, slightly mottled with black; hilum black.

87028. No. 4650. *Soseishizu.* A medium-sized, oval, brown bean with the testa more or less split.

87029. No. 4651. *Hinchongutari.* Medium-large, oval, glossy, yellow beans with the hilums pale to brown.

87030. No. 4652. *Bannungumutongui.* From Unmonmen. A medium-sized, oval, light-yellow bean with brown hilum.

87031. No. 4653. *Nurinkongu.* From Kayomen. A medium-sized, oval, glossy, yellow bean with light-brown hilum.

87032. No. 4654. *Hakuchota.* From Shudomen. A medium-sized, oval, glossy, yellow bean with russet-brown hilum.

87033. No. 4655. *Nunkamaki.* From Gekkomen. A medium-sized, oval, light-yellow bean with light-russet hilum.

87034. No. 4656. *Nunburukongu.* From Kasenmen. A medium-sized, oval, light-yellow bean with russet-brown hilum.

87035 to 87039. From Tanimen.

87035. No. 4657. *Torumukongu.* A medium-small, oval, glossy, brown bean.

87036. No. 4658. *Burukongu.* Medium-large, oval, brown beans with the testa more or less split.

87037. No. 4659. *Hingkongu.* A medium-sized, oval, yellow bean with large, brown hilum.

87038. No. 4660. *Chongute.* A medium-sized, oval, green bean with brown hilum and green germ.

87039. No. 4661. *Chirugumukongu.* A medium-small, oval, slightly flattened, glossy, black bean with yellow germ.

87040. No. 4662. *Kon.* From Kasaimen. A medium-sized, oval, yellow bean with brown hilum.

86876 to 87084—Continued.

87041. No. 4663. *Ogonta.* From Hojomen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87042 to 87044. From the Keisho Hokudo Seed & Nursery Farm.

87042. No. 4664. A medium-sized, oval, greenish-yellow bean slightly mottled with brown; hilum brown.

87043. No. 4665. *Gizu.* A medium-sized, light-yellow bean with pale hilum.

87044. No. 4666. *Shozu.* A mixture of yellow and greenish-yellow varieties.

87045 to 87074. From Keisho Nando.

87045. No. 4668. *Bamumitsukon.* From Shakomen. A medium-sized, slightly flattened, glossy, black bean with yellow germ.

87046. No. 4669. *Purukon.* From Shakomen. A small, oval, green bean with russet-brown hilum and green germ.

87047. No. 4670. *Anjanbangu.* From Shinanmen. A medium-sized, oval, glossy, yellow bean with brown hilum.

87048. No. 4671. *Purute.* From Tanjormen. A medium large, oval, glossy, green bean with black hilum and green germ.

87049. No. 4672. *Kanan kor.* From Kyosaimen. A medium large, oval, glossy, yellow bean with brown hilum.

87050. No. 4673. *Urusankon.* From Niummen. A medium-sized, oval, glossy, yellow bean with brown hilum.

87051. No. 4674. *Urusankon.* From Noshomen. A medium-sized, oval, light-yellow bean with brown hilum.

87052. No. 4675. *Urusankon.* From Ryosanmen. A large, oval, glossy, light-yellow bean with russet-brown hilum.

87053. No. 4676. *Pakukankon.* From Kasaimen. A medium small, black, oval bean which is slightly flattened and has a yellow germ.

87054. No. 4677. *Kanankon.* From Isenmen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87055. No. 4678. *Sekizu* (red bean). From Saijomen. A medium-sized, oval, glossy reddish-brown bean.

87056. No. 4679. *Kanankon.* From Basenmen. A very large, oval, slightly flattened yellow bean with light-brown hilum and the testa more or less split.

87057. No. 4680. *Norichon.* From Hinkokumen. A medium small, nearly round, glossy, light-brown bean.

87058. No. 4681. *Himashimame.* From Masenmen. A medium large, oval, slightly flattened, black bean with the testa split into network of white on the sides.

87059. No. 4682. *Moyashimame.* From Saijomen. A medium-sized, oval, glossy, black bean with yellow germ.

86876 to 87084—Continued.

87060. No. 4683. *Urusankon.* From Naiseimen. A medium-sized, oval, yellow bean with pale hilum.

87061. No. 4684. *Kon.* From Nousenmen. A medium-large, oval, glossy, yellow bean with pale hilum.

87062. No. 4685. *Purukon.* From Kyosenmen. A medium-sized, oval, green bean with brown hilum and green germ.

87063. No. 4686. *Yorikuchiyoubi.* From Towkokow. A small oval, light-yellow bean slightly mottled with brown; hilum pale.

87064. No. 4687. *Koumurunurikon.* From Nanmen. A large, oval, slightly flattened, glossy, black bean with yellow germ.

87065. No. 4688. *Urusankon.* From Tosaimen. A mixture of medium-sized, yellow-seeded varieties.

87066. No. 4689. *Chunorikon.* From Naumen. A very small, nearly round, cloudy, yellow bean with black hilum; of value for sprouts.

87067. No. 4690. *Purute.* From Kihomen. A small, nearly round, cloudy, yellow bean with black hilum; of value for sprouts.

87068. No. 4691. *Paimikon.* From Koganmen. A medium-sized, oval, light-yellow bean with large russet-brown hilum and the testa more or less split.

87069. No. 4692. *Paiminkon.* From Jozanmen. A medium-sized, oval, slightly flattened, glossy, black bean with yellow germ.

87070. No. 4693. *Moyashimame* (sprout bean). From Tosenmen. A mixture of yellow and yellowish-green, small-seeded varieties.

87071. No. 4694. *Moyashimame* (sprout bean). From Yunnanmen. A medium-sized, slightly flattened, glossy, green bean with brown hilum and green germ.

87072. No. 4695. *Waichuri.* From Yunnanmen. A medium-sized, oval, light-yellow bean with pale hilum.

87073. No. 4696. *Kanankon.* From Sekiryomen. A very large oval, glossy, yellow bean with russet-brown hilum and the testa more or less split.

87074. No. 4697. *Rokukon.* From Taishamen. A large, oval, olive-green bean with green germ, slate-black hilum, and testa more or less split.

87075 to 87084. From Kokaido.

87075. No. 4698. *Yanchorubeki.* From Angakumen. A medium-sized, oval, glossy, yellow bean with brown hilum.

87076. No. 4699. *Oiarukon.* From Komen. A large, oval, glossy, yellow bean with pale hilum.

87077. No. 4700. *Chantanpakute.* From Shinkeimen. A medium-large, oval, glossy, yellow bean with pale hilum.

87078. No. 4801. *Mitta.* From Kaishumen. A medium-sized, oval, glossy, yellow bean with light slate-black hilum.

86876 to 87084—Continued.

87079. No. 4802. *Purutekor.* From Dantomen. A medium-large, green, oval bean with black hilum and green germ.

87080. No. 4803. *Tanseita.* From Shitsunanmen. A large, oval, light-green bean with pale hilum and yellow germ.

87081. No. 4804. *Shoseita.* From Ichidomen. A medium-small, nearly round, glossy-green, bean with light-slate hilum.

87082. No. 4805. *Pitatekon.* From Chojumen. A medium-sized, oval, glossy, dark-brown bean with green germ.

87083. No. 4806. *Togomata.* From Hakubumen. A large, oval, slightly flattened, black bean with testa split into white network on sides.

87084. No. 4807. *Komuzonka.* From Dantomen. A medium-small, oval, slightly flattened, black bean with yellow germ.

87085 to 87122.

From Japan and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received in April, 1930.

87085. PUERARIA THUNBERGIANA (Sieb. and Zucc.) Benth. Fabaceae. **Kudzu.**

No. 3288. Obtained from T. Sakata & Co., Yokohama, Japan, January 11, 1930. Seed gathered from wild plants grown in the Mount Fuji region. Kudzu is not cultivated in Japan. A flour is made from the roots, and the vines are used in making small table mats, handles for various articles, and for many similar purposes.

87086 to 87122. Received March 10, 1930, through the Bureau of Industry, Government General, Keijo, Chosen.

87086 to 87089. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

Native varieties of Chosen millet, from Zenra Hokudo.

87086. No. 5012. *Awazairaishu.*

87087. No. 5014. *Fu ko.*

87088. No. 5013. *Awazairaishu.*

87089. No. 5020. *Awazairaishu.*

87090 to 87097. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

87090. No. 4590. *Soba,* from Chusei Hokudo.

87091. No. 4591. *Soba.*

87092. No. 4592. *Bansei* (late buckwheat), from Chusei Hokudo.

87093 to 87097. From Zenra Hokudo.

87093. No. 4994. *Soba zairai shu.*

87094. No. 4995. *Saru me melu.*

87095. No. 4996. *Tankaku Makung.*

87096. No. 4997. *Moku baku.*

87097. No. 5006. *Soba zairai shu.*

87098 and 87099. GOSSYPIUM HIRSUTUM L. Malvaceae. **Upland cotton.**

87085 to 87122—Continued.

87098. No. 4540. *Wata zaira men,* a native variety from Chusei Hokudo.

87099. No. 4541. *Rekeechimen,* from Chusei Hokudo.

87100. GOSSYPIUM NANKING Meyen. Malvaceae. **Cotton.**

No. 4539. *Sikemen* (red cotton), from Chusei Hokudo.

87101 to 87106. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

87101 to 87104. From Chusei Hokudo.

87101. No. 4570. *Koso.*

87102. No. 4571. *Rokubeu.*

87103. No. 4572. *Mumie pori.*

87104. No. 4575. *Hege.*

87105. No. 5055. *Do dai baku* (large body barley), from Zenra Hokudo.

87106. No. 5057. *Sanlaku,* from Zenra Hokudo.

87107 to 87113. ORYZA SATIVA L. Poaceae. **Rice.**

From Chusei Hokudo.

87107. No. 4532. *Kozagumo.* Paddy rice.

87108. No. 4534. *Ozeki.* Paddy rice.

87109. No. 4542. *Uyobi.* Upland rice.

87110. No. 4543. *Rikuto.* Upland rice.

87111. No. 4544. *Rikuto.* Upland rice.

87112. No. 4545. *Rikuto.* Upland rice.

87113. No. 4546. *Kurokami* (black hair rice). Upland rice.

87114 to 87117. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Zenra Hokudo.

87114. No. 5021. California wheat. Very small grain.

87115. No. 5024. *Komugi zairaishu,* a native variety.

87116. No. 5031. *Nulsu misu.*

87117. No. 5035. *Ejuiea.*

87118 to 87122. ZEA MAYS L. Poaceae. **Corn.**

From Chusei Hokudo.

87118. No. 4560. *Ton toumorokoshi wase* (early corn). Interesting, rather small, white, flinty corn.

87119. No. 4561. *Toumorokashi.* A peculiar-looking seed.

87120. No. 4562. *Toumorokashi.* Small reddish grains which somewhat resemble sorghum.

87121. No. 4563. *Toumorokashi.* A small-grained, white, flinty corn.

87122. No. 4564. *Toumorokashi.* A rather small-grained, white, flinty corn.

87123. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Victoria, Cameroon. Seeds presented by T. D. Maitland, Superintendent, Botanic Gardens. Received April 11, 1930.

A variety grown locally.

87124 to 87137. ORYZA SATIVA L. Poaceae. **Rice.**

From Nanking, China. Seeds purchased from C. H. Heh, head of the Department of Agronomy, College of Agriculture and Forestry, through F. A. McClure. Received April 11, 1930.

Rice varieties secured from farmers in Changshu Hsien and Kiangyin Hsien, Kiangsu Province.

87124. No. 3. "Blood" glutinous rice, from Changshu.

87125. No. 1. "Fruit" glutinous rice, from Changshu.

87126. No. 9. Bearded glutinous rice, from Kiangyin.

87127. No. 6. Common glutinous rice, from Changshu.

87128. No. 12. Nonglutinous rice, from Kiangyin.

87129. No. 7. Late nonglutinous rice, from Changshu.

87130. No. 11. Late nonglutinous rice, from Kiangyin.

87131. No. 2. "Odorous" nonglutinous rice, from Changshu.

87132. No. 8. "Phoenix" nonglutinous rice, from Changshu.

87133. No. 5. "Sixty-day" nonglutinous rice, from Changshu.

87134. No. 4. "Sixty-day" nonglutinous rice, from Kiangyin.

87135. No. 14. "Sixty-day" nonglutinous rice, from Kiangyin.

87136. No. 10. "Wild glutinous" rice, from Kiangyin.

87137. No. 13. "Wild rice" (nonglutinous), from Kiangyin.

87138 and 87139.

From the Philippine Islands. Seeds presented by P. J. Wester, Horticulturist, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received April 11, 1930.

87138. SOLANUM sp. Solanaceae.

Kubiu. The yellow fruit is about the size and shape of an egg and has a tart, pleasant taste when sliced and cooked with sugar. It is originally from Java and should thrive in southern Florida and California.

87139. ASYSTASIA GANGETICA (L.) T. Anders. Acanthaceae.

A trailing and climbing, very vigorous everblooming vine with flowers ranging from nearly white to buff and purple. It should become a very popular ornamental in Florida and California, and may be used as an outdoor bedding plant as far north as Washington, D. C.

87140 to 87199.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 12, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

87140. AVENA SATIVA L. Poaceae. **Oats.**

No. 4908. *Enbaku,* from Chusei Nando.

87141. CANNABIS SATIVA L. Moraceae. **Hemp.**

No. 4519. *Ouami,* from Keikido.

87142 to 87160. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. **Millet.**

The millets are very important small grain crops throughout the Orient.

87142. No. 4504. *Awa* millet, from Keikido.

87143. No. 4505. *Awa* millet, from Keikido. Small, round yellow seed.

87144 to 87150. From Chusei Hokudo.

87144. No. 4549. *Nomimochi.*

87145. No. 4550. *Jutonguchizo.*

87146. No. 4551. *Chiazo.*

87147. No. 4552. *Seiryo.*

87148. No. 4553. *Ochiazo.*

87149. No. 4554. *Kogendo.*

87150. No. 4555. *Mutsutokuzo.*

87151. No. 4731. *Zairai,* from Zenra Nando.

87152. No. 4732. *Awa* (Indian millet), from Zenra Nando.

87153. No. 5008. *Awa zairai shu.* A native variety.

87154 to 87160. From Zenra Hokudo.

87154. No. 5010. *Gurusosuku.*

87155. No. 5011. *Chiya so sukuru.* Red seed.

87156. No. 5015. *Awa zairai shu.* A native variety.

87157. No. 5016. *Awa zairai shu.* A native variety.

87158. No. 5017. *Mesosuku.*

87159. No. 5018. *Kairyo* (proved millet).

87160. No. 5019. *Awa zairai shu.* A native variety.

87161 to 87163. ECHINOCHLOA CRUSGALLI EDULIS Hitchc. Poaceae. **Japanese millet.**

87161. No. 4520. *Hie,* from Kahei Keikido.

87162. No. 4706. *Hie,* from Chusei Hokudo.

87163. No. 4905. *Hie* (barn grass), from Chusei Nando.

87164 to 87173. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

87164. No. 4510. *Saba,* from Rensen, Keikido.

87165. No. 4376. *Saba,* from Zenra Nando.

87140 to 87199—Continued.

87166. No. 4737. *Saba,* from Zenra Nando.

87167 to 87173. *Saba zairai shu* (buckwheat, native variety), from Zenra Hokudo.

87167. No. 4998.

87168. No. 5000.

87169. No. 5001.

87170. No. 5003.

87171. No. 5004.

87172. No. 5505.

87173. No. 5007.

87174 to 87177. GOSSYPIUM spp. Malvaceae. Cotton.

87174. GOSSYPIUM HIRSUTUM L. Upland cotton.

No. 4512. *Rikeechimen,* from Keijo Keikido.

87175. GOSSYPIUM HIRSUTUM L. Upland cotton.

No. 4962. *Kengu suemu pumudo* from Zenra Hokudo.

87176. GOSSYPIUM NANKING Meyen.

No. 4523. *Zairaimen* (native cotton), from Yokei Keikido.

87177. GOSSYPIUM sp.

No. 4746. *Zairaimen* (original cotton), from Zenra Nando.

87178 to 87199. HORDEUM spp. Poaceae. Barley.

87178 to 87180. HORDEUM VULGARE CELESTE L. Six-rowed barley.

Native name, *Hadaka mugi.*

87178. No. 4516. Naked barley, from Keikido.

87179. No. 4709. From Chusei Hokudo.

87180. No. 4710. From Chusei Hokudo.

87181 to 87199. HORDEUM VULGARE PALLIDUM Seringe. Six-rowed barley.

87181. No. 4507. *Omugi.* A small-grained, bright-colored, nice-looking barley from Keikido.

87182. No. 4508. *Omugi,* from Keikido.

87183 to 87185. From Chusei Hokudo.

87183. No. 4573. *Zairaiso* (original barley).

87184. No. 4574. *Nurupari.*

87185. No. 4576. *Son.*

87186. No. 4770. *Kawa boko,* from Zenra Nando.

87187 to 87189. From Chusei Nando.

87187. No. 4792. *Tonpori.*

87188. No. 4793. *Sonbaku.*

87189. No. 4794. *Nuru pori.*

87190 to 87199. From Zenra Hokudo. *Omugi zairai shu,* a native variety.

87190. No. 5037.

87140 to 87199—Continued.

87191. No. 5041.

87192. No. 5042.

87193. No. 5044. *Nagabo omugi* (long-spiked barley).

87194. No. 5045. *Kawa mugi* (skin barley).

87195. No. 5047. *Zungu bori.*

87196. No. 5049. *Tongu bori.*

87197. No. 5051. *Omugi zairai shu,* a native variety.

87198. No. 5052. *Tongu katsu bori.*

87199. No. 5056. *Bozu* (awnless barley).

87200. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

From Prague, Czechoslovakia. Seeds purchased from Egidy, Kriner & Sohne by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received April 12, 1930.

A variety grown locally.

87201 to 87280. ORYZA SATIVA L. Poaceae. Rice.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 12, 1930.

Received through the Bureau of Industry, Government General, Keijo, March, 1930.

87201 to 87203. From Zenra Hokudo; paddy rice.

87201. No. 1926. *Zuso.*

87202. No. 1934. *Nakate nishiki bozu.*

87203. No. 3938. *Kokura miyako.*

87204. No. 4394. *Rikuto owari mochi* (Owari gluten). Upland rice from Yohei, Keikido.

87205. No. 4395. *Rikuto zairai mochi* (original gluten); an upland rice with small grain from Shini Keikido.

87206 and 87207. From Suigen, Keikido; paddy rice.

87206. No. 4396. *Suito tamanishiki.*

87207. No. 4397. *Suito haya shinriki* (early shinriki).

87208. No. 4398. *Suito sekihaku.* Paddy rice from Kahei, Keikido.

87209. No. 4399. *Suito hinode* (sunrise). Paddy rice from Ryujin, Keikido.

87210. No. 4400. *Suito bakuso.* Paddy rice from Chotan, Keikido. A nice-looking, short-kernel rice.

87211. No. 4501. *Suito hasshoso.* Paddy rice from Anjo, Keikido.

87212. No. 4502. *Suito aikoku.* A short-seeded paddy rice from Ryujin, Keikido.

87213 to 87221. From Chusei Hokudo; paddy rice.

87213. No. 4527. *Gin.*

87214. No. 4528. *Odaito.*

87215. No. 4529. *Shinbonchiki ba.*

87201 to 87280—Continued.

87216. No. 4530. *Kugatsu.*

87217. No. 4531. *Hakuso.*

87218. No. 4533. *Mame.*

87219. No. 4535. *Nishiki.*

87220. No. 4536. *Nishiki No. 9.*

87221. No. 4537. *Haya shinriki.*

87222 to 87228. From Zenra Nando; paddy rice.

87222. No. 4713. *Haya shinriki.*

87223. No. 4714. *Kokura miyako.*

87224. No. 4715. *Tamanishiki.*

87225. No. 4716. *Omachi.*

87226. No. 4717. *Chujiku shinriki* (middle-season crop).

87227. No. 4718. *Benkei.*

87228. No. 4719. *Waiso* (dwarf).

87229 to 87232. From Zenra Nando; upland rice.

87229. No. 4720. *Oruke.*

87230. No. 4721. *Rikuto* (upland rice).

87231. No. 4722. *Bidan santo.*

87230. No. 4721. *Rikuto* (upland rice).

87233 and 87234. From Chusei Nando; paddy rice.

87233. No. 4779. *Orujibe.*

87234. No. 4783. *Za shinriki.*

87235 to 87256. From Zenra Hokudo; paddy rice.

87235. No. 4914. *Meao.*

87236. No. 4915. *Shikoku.*

87237. No. 4916. *Daiso.*

87238. No. 4917. *Suzuki shinriki.*

87239. No. 4918. *Wai naka mi.*

87240. No. 4919. *Kakueki.*

87241. No. 4920. *Kokko.*

87242. No. 4922. *Futafushi mari so.*

87243. No. 4923. *Suzuki so.*

87244. No. 4925. *Jindo so.*

87245. No. 4927. *Gan fu so.* Seed with red hulls.

87246. No. 4928. *Beiso.*

87247. No. 4929. *Suigen to.*

87248. No. 4930. *Kinzan.*

87249. No. 4931. *Wase.*

87250. No. 4932. *Shu kakudo.*

87251. No. 4933. *Aikoku.*

87252. No. 4935. *Bansei ginbozu.*

87253. No. 4936. *Naka shinriki.*

87254. No. 4937. *Benkei.*

87255. No. 4939. *Sekizan so.*

87256. No. 4940. *Tamanishiki.*

87257. No. 4941. *Haya shinriki.* Paddy rice from Zenra Nando.

87258 and 87259. Paddy rice from Zenra Hokudo.

87258. No. 4942. *Takachiho.*

87201 to 87280—Continued.

87259. No. 4943. *Kinai No. 14.*

87260 to 87277. Upland rice from Zenra Hokudo.

87260. No. 4944. *Kaneko uruchi.*

87261. No. 4945. *Mosanto.*

87262. No. 4946. *Kurukari santo.*

87263. No. 4947. *Miru tare.*

87264. No. 4948. *Zairai* (native variety).

87265. No. 4949. *Zairai shu* (native variety).

87266. No. 4950. *Kurusanto.*

87267. No. 4951. *Zairai shu.*

87268. No. 4952. *Zairai shu.*

87269. No. 4953. *Zairai shu.*

87270. No. 4954. *Zairai shu.*

87271. No. 4955. *Zairai shu.*

87272. No. 4956. *Rikuto* (upland rice).

87273. No. 4957. *Rikuto* (upland rice).

87274. No. 4958. *Toyaji chiyara.*

87275. No. 4959. *Kokuzan to.*

87276. No. 4960. *O Dari.*

87277. No. 4961. *Kurokami.*

87278. No. 5280. *Suito kukura miyako;* paddy rice from Suigen Keikido.

87279. No. 5305. *Ritkuto kanekomochi* (Kaneko gluten); upland rice from Keikido, Keijo.

87280. No. 4538. *Tamanishiki;* paddy rice from Chusei Hokudo.

87281 to 87344.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 12, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

87281 to 87285. PANICUM MILIACEUM L. Poaceae. Proso.

87281. No. 4513. *Kibi.* Indian millet from Ryujin, Keikido.

87282. No. 4910. *Chichiangu.* From Chusei Nando.

87283. No. 4557. *Kibi.* Indian millet from Zenra Nando.

87284. No. 4758. *Kibi.* Indian millet from Zenra Nando.

87285. No. 4599. *Black Chichiangu,* from Chusei Hokudo.

87286 to 87344. PHASEOLUS spp. Fabaceae.

87286 to 87320. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Adsuki bean.

87286. No. 4524. *Azuki,* from Keikido Ken. A medium-sized, maroon-colored bean.

87287 to 87297. From Chusei Hakudo.

87287. No. 4577. *Azuki.* A medium-sized, black and olive mottled bean.

87281 to 87344—Continued.

87288. No. 4578. *Haru azuki.* A medium-sized, light buff-colored bean.

87289. No. 4580. *Azuki.* A large reddish-brown bean.

87290. No. 4581. *Kurupatsu.* A medium-sized bean, mottled olive and black.

87291. No. 4582. *Azuki.* A medium-small, reddish-brown bean.

87292. No. 4583. *Azuki.* A medium-large, glossy, red bean.

87293. No. 4584. *Azuki.* A medium-large, reddish-brown bean.

87294. No. 4585. *O Shozu.* A medium-large bean mottled olive and black.

87295. No. 4586. *Azuki.* A large maroon-colored bean.

87296. No. 4587. *Deakori.* A medium-sized bean mottled black and reddish-brown.

87297. No. 4589. *Azuki.* A medium-sized, brown bean.

87298. No. 4902. *Seki patsu.*

87299. No. 4903. *Kom patsu.* A medium-sized bean marbled olive and gray.

87300. No. 4904. *Puru patsu.* A medium-sized green bean; should be excellent for sprouts.

87301 to 87315. From Zenra Hokudo.

87301. No. 4978. *Sekizu.* A medium-small, reddish-brown bean.

87302. No. 4979. *Koyangui.* A medium-sized bean mottled black and white.

87303. No. 4980. *Paku patsu.* A medium-sized, light-buff seed.

87304. No. 4981. *Azuki zairai shu.* A small, reddish, native variety which has a brown seed.

87305. No. 4982. *Azuki zairai shu.* A native variety which has a small reddish-brown seed.

87306. No. 4983. *Sekizu.* A medium-sized, brownish-red bean.

87307. No. 4984. *Azuki zairai shu.* A native variety which has medium-sized, reddish-brown seed.

87308. No. 4985. *Sekizu.* A medium-sized, reddish-brown bean.

87309. No. 4986. *Azuki zairai shu.* A native variety with medium-sized, reddish-brown seed.

87310. No. 4987. *Azuki zairai azuki.* A native variety with medium-sized, reddish-brown seed.

87311. No. 4988. *Azuki zairai azuki.* A native variety with medium-sized, reddish-brown seed.

87312. No. 4989. *Sekizu.* A medium-large, reddish-brown bean.

87313. No. 4991. *Sekizu.* A medium-sized, reddish-brown bean.

87314. No. 4992. *Sekizu.* A large, reddish-brown bean.

87281 to 87344—Continued.

87315. No. 4993. *Goju nichi azuki* (50-day Azuki). A medium-sized bean mottled white and black.

87316 to 87320. From Keisho Hokudo.

87316. No. 5143. *Patsu.* A medium-sized bean mottled olive and black.

87317. No. 5144. *Goju nichi azuki.* A medium-sized bean mottled brown and black.

87318. No. 5146. A medium-sized, reddish-brown bean.

87319. No. 5147. *Goju nichi azuki.* A medium-sized, reddish-brown bean.

87320. No. 5148. *Haya shozu.* A medium-sized, maroon-colored bean.

87321 to 87339. PHASEOLUS AUREUS Roxb. **Mung bean.**

87321. No. 4974. *Rokuto zairai* (native mung bean). A variety with a small green seed, from Zenra Hokudo.

87322. No. 4517. *Rokuto.* A small, dull, dark-green bean, from Koshu Heikido.

87323 to 87325. From Chusei Hokudo.

87323. No. 4567. *Rokuto.* An excellent variety of the Golden Mung bean. It should be of value for sprouts.

87324. No. 4568. *Rokuto.* An excellent variety of the Golden Mung bean. It should be of value for sprouts.

87325. No. 4569. *Rokuto.* A medium-sized, dull-green bean.

87326. No. 4911. *Rokuto.* A small dull-green bean, from Chusei Nando.

87327 to 87338. From Zenra Hokudo. *Rokuto Zairai,* the native mung bean, which is small and dull green.

87327. No. 4965.

87328. No. 4966.

87329. No. 4967.

87330. No. 4968.

87331. No. 4969.

87332. No. 4970.

87333. No. 4971.

87334. No. 4972.

87335. No. 4973.

87336. No. 4975.

87337. No. 4976.

87338. No. 4977.

87339. No. 5157. *Rokuto.* A small, dull-green bean, from Keisho Hokudo.

87340 and 87341. PHASEOLUS CALCARATUS Roxb. **Rice bean.**

87340. No. 4588. *Ripatsu.* A mixture of maroon and greenish-yellow beans, from Chusei Hokudo.

87281 to 87344—Continued.

87341. No. 5145. *Kozu.* A medium-sized, reddish-brown bean, from Keisho Hokudo.

87342 to 87344. PHASEOLUS VULGARIS L. **Common bean.**

87342. No. 4522. *Ingui.* A mottled garden bean from Keikido. This is one of the common garden beans widely distributed in Japan.

87343. No. 4566. *Gangunangu kongu.* From Chusei Hokudo.

87344. No. 4798. *Ingen.* From Chusei Nando.

87345 to 87372.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 12, 1930.

Received through the Bureau of Industry, Government General, Keijo, Chosen, March 10, 1930.

87345 to 87348. PISUM SATIVUM L. Fabaceae. **Pea.**

87345. No. 4503. *Endo,* from Keikido. A rather small, light-green field pea.

87346. No. 4547. From Chusei Hokudo.

87347. No. 4788. *Endo,* from Chusei Nando.

87348. No. 4726. *Etsupotsu,* from Zenra Nando.

87349. SECALE CEREALE L. Poaceae. **Rye.**

No. 4514. *Rai mugi,* from Keikido.

87350 to 87355. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

87350. No. 4509. *Morokohi,* from Rensen, Keikido.

87351 to 87354. From Chusei Hokudo.

87351. No. 4556. *Bimokususu.*

87352. No. 4557. *Chiyangutesusu.*

87353. No. 4558. *White susu.*

87354. No. 4559. *Bangu mangnisusu.*

87355. No. 4796. *Bomususu.* From Chusei Nando.

87356 to 87372. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

87356. No. 4525. *Komungi.*

87357. No. 4256. Received from the Yama Masa Shoyu Sauce Factory, Nakano-Machi, Tokyo, Japan, February 28, 1930. This seed is used in the manufacture of soy sauce.

87358. No. 4526. *Komungi.* A soft wheat from Keikido.

87359 to 87363. From Chusei Hokudo.

87359. No. 4600.

87360. No. 4701.

87361. No. 4702.

87362. No. 4703. *Furutsee.*

87363. No. 4704. *California.*

87364. No. 4799. *California,* from Chusei Nando.

87365 to 87372. From Zenra Hokudo.

87345 to 87372—Continued.

87365 to 87367. *Komugi zairai shu.* A native variety of wheat.

87365. No. 5026.

87366. No. 5027.

87367. No. 5028.

87368. No. 5029. *Shiro bozu* (white, **smooth wheat).**

87369 to 87371. *Komugi zairai shu.*

87369. No. 5030.

87370. No. 5033.

87371. No. 5034.

87372. No. 5036. *Moreya.*

87373 to 87381.

From Japan and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 12, 1930.

87373. VICIA FABA L. Fabaceae. **Broadbean.**

No. 4250. *Soramame.* From the Ikinawa Ken Agricultural Experiment Station, Nawa, Ikinawa Ken, Japan, March 10, 1930. Said to be a native variety in the Ikinawa Prefecture. A medium-sized, olive-green bean with black hilum.

87374 to 87376. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

87374. No. 4548. From Chusei Hokudo.

87375. No. 4579. *Tongubu.* From Chusei Hokudo. A medium-small, white beam with black eye.

87376. No. 5152. *Kintoki.* From Keisho Hokudo. A medium-sized cowpea resembling Whippoorwill; marked or marbled with white.

87377 to 87381. ZEA MAYS L. Poaceae. **Corn.**

Native name *Toumoro koshi.*

87377. No. 4506. From Keikido. Yellow flint corn.

87378. No. 4565. From Chusei Hokudo. The grains are flat and round, clear white, with a flinty appearance.

87379. No. 4790. From Chusei Nando.

87380. No. 5140. From Zenra Hokudo. A very small, yellowish-white grain of flinty appearance.

87381. No. 5142. From Zenra Hokudo. Small, different-colored grains which look flinty.

87382. LARIX SIBIRICA Ledeb. Pinaceae. **Siberian larch.**

From Nijni-Taghilskij District, Ural Area, Union of Socialistic Soviet Republics. Seeds presented by the Merkoushinskij Verhotourski Commission through H. V. Harlan, Bureau of Plant Industry. Received April 14, 1930.

A tall, deciduous, very hardy larch, up to 125 feet high. It has a straight, slender trunk and short branches. Native to Siberia.

For previous introduction see No. 73799.

87383. GUILIELMA GASIPAES (H. B. K.) Bailey (*G. speciosa* Mart.). Phoenicaceae. **Pupunha.**

87383—Continued.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Director, Experiment Gardens. Received April 19, 1930.

An Amazonian palm, becoming ultimately about 60 feet high, closely allied to the pejibaye (*Guilielma utilis*). Like the pejibaye, it furnishes food for great numbers of people in regions where it is indigenous, and appears to be of promise for cultivation as a food plant throughout the Tropics in congenial situations.

For previous introduction see No. 60367.

87384. LANDOLPHIA sp. Apocynaceae.

From Fort Dauphin, Madagascar. Seeds presented by P. B. Stolee, Lutheran Mission. Received April 16, 1930.

Voahena mainty (black rubber). From the Manantenina District, 70 or 80 miles north of Fort Dauphin. The fruit is pear shaped, and the skin is green, blotched with black.

87385 to 87387.

From Eala, Belgian Congo. Seeds presented by A. Corbisier-Baland, Director, Botanic Gardens. Received April 16, 1930.

87385. LANDOLPHIA KLAINII Pierre. Apocynaceae.

A tropical African climbing shrub which is said to be the principal rubber-producing plant in the Gabon district, French Equatorial Africa. The oblong, leathery leaves are glossy green, and the hard, globose fruits are 6 to 10 inches in diameter.

For previous introduction see No. 64164.

87386. PALAQUIUM OBLONGIFOLIUM (De Vriese) Burck. Sapotaceae.

A tropical tree with oblong-lanceolate coriaceous leaves 4 to 6 inches long, green above and golden beneath. The small flowers, in axillary clusters of one to six, are followed by brownish pubescent, ovoid fruits 2 to 3 inches in diameter. It is native to Sumatra and Borneo and is of possible value as a source of rubber.

87387. PAYENA LEERII (T. and B.) Kurz. Sapotaceae.

The *gutta sundek* tree of the Malay Peninsula; of possible value as a source of gutta-percha.

For previous introduction see No. 73251.

87388 to 87398.

From the Union of Socialistic Soviet Republics. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received April 16, 1930.

Received through the Institute of Applied Botany, Leningrad.

87388. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

No. 311. From Samarkand, Uzbek Republic (Turkestan).

87389. CITRULLUS VULGARIS Schrad. Cucurbitaceae. Watermelon.

No. 317. From Chalek, near Samarkand, Uzbek Republic (Turkestan).

87388 to 87398—Continued.

87390 to 87392. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

87390. No. 318. From the village of Bob-Arab near Ashkabad, Turkoman Republic, October 3, 1929.

87391. No. 319. From the village of Bob-Arab near Ashkabad, Turkoman Republic, October 4, 1929.

87392. No. 257. From Krassovskaya. One of the best Ukrainian strains of alfalfa.

87393. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

No. 313. From northeast of Fergana, Uzbek Republic (Turkestan).

87394 to 87398. ZEA MAYS L. Poaceae. Corn.

87394. No. 312. Red corn grown to a limited extent in the vicinity of Chardjni.

87395. No. 312. White corn grown to a limited extent in the vicinity of Chardjni.

87396. No. 314. From Samarkand, Uzbek Republic (Turkestan).

87397. No. 315. Red corn from Ashkabad, Uzbek Republic (Turkestan), October 1, 1929.

87398. White corn from Ashkabad, Uzbek Republic (Turkestan), October 1, 1929.

87399 and 87400. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

From the Union of Socialistic Soviet Republics. Scions presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures, Leningrad. Received April 16, 1930.

87399. Variety *Adutwarhdam.*

87400. Variety *Xypman.*

87401. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. Mandarin orange.

From Cairo, Egypt. Scions collected by Dr. H. S. Fawcett, University of California. Received April 17, 1930.

No. 90. Bud wood from the best tree in Mr. Bahgat's orchard, near Tanta, Egypt. Said to have fine large fruit.

87402 to 87407.

From Dotnuva, Lithuania. Seeds presented by T. Kriscinnap, Chief, Crops Division, Agricultural Academy. Received April 17, 1930.

From the Plant-Breeding Station at Dotnuva.

87402. AVENA SATIVA L. Poaceae. Oats.

No. A–331.

87403. HORDEUM DISTICHON PALMELLA Harlan. Poaceae. Two-rowed barley.

144–N. *Swan's neck.*

87404. HORDEUM DISTICHON PALMELLA Harlan. Poaceae. Two-rowed barley.

145–N. *Golden.*

87405. SECALE CEREALE L. Poaceae. Rye.

Winter rye of Riga.

87402 to 87407—Continued.

87406. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From the 1929 harvest.

87407. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

From the harvest of 1929.

87408 to 87430. ORYZA SATIVA L. Poaceae. **Rice.**

From Canton, China. Seeds presented by Koo Kwai Fan, in charge of farm crops, Lingnan Agricultural College, through F. A. McClure, Lingnan University.

Varieties of Chinese rice, from the 1929 harvest, from various localities in Kwangtung Province.

F.P.I. No.	*F.A.M. No.*	*Lingnan Agr. Col. No.*	*Romanized name*	*Crop*
87408	1055	2	In chui hung	Early.
87409	1056	4	Noh chaap	Late.
87410	1057	5	Kam shaan chim	Early.
87411	1058	8	Paak hok so chim	Late.
87412	1059	18	Yeung uen chim	Early.
87413	1060	24	Koi leung tung koon paak	Do.
87414	1061	26	Ngan chim	Do.
87415	1062	46	Ma mei ch'ai	Do.
87416	1063	50	On naam kaang	Do.
87417	1064	[1] 50	Heung kuk	Late.
87418	1065	51	Shiu koo Z	Early.
87419	1066	58	Taai kwat yau chim	Late.
87420	1067	65	Wong hok kam fung	Do.
87421	1068	105	Paak hok sz miu	Late.
87422	1069	[1] 107	Ngan nga chim	Do.
87423	1070	111	Paak hok yau chim	Do.
87424	1071	112	Hung t'au so chim	Do.
87425	1072	116	Shong kong chim	Do.
87426	1073	117	Taai chung wong hok so chim	Do.
87427	1074	136	Paak hok so chim	Do.
87428	1075	150	Ch'ik mai sz miu	Do.
87429	1076	156	Yeung ch'un chuk chim	Do.
87430	1077	165	Ch'ang shui chim	Do.

[1] Second crop.

87431. CITRUS AURANTIUM L. Rutaceae. **Sour orange.**

From Cairo, Egypt. Seed collected by Dr. H. S. Fawcett, University of California. Received April 18, 1930.

No. 91. From the Horticultural Division of the Ministry of Agriculture. Large fruits from vigorous standard trees.

87432 to 87436.

From Buitenzorg, Java. Seeds presented by the Director of the Botanic Garden. Received April 18, 1930.

87432. CURCUMA PETIOLATA Roxb. Zinziberaceae.

A tropical perennial with a rootstock which sends up a tuft of four to six oblong pointed leaves 6 to 9 inches long on petioles about a foot long. The yellowish-white flowers are in a spike 6 inches long and are surrounded by large, purple or lilac bracts. It is native to India and is considered to be the showiest of the curcumas.

87433. CURCUMA ZEDOARIA (Bergius) Roscoe. Zinziberaceae.

A tropical perennial with a large tuberous rootstock, lanceolate leaves 1 to 2 feet long, pale-yellow flowers, and bright-red bracts. It is native to India, where it is cultivated for the rootstocks, which resemble ginger in pungency.

87434 to 87436. LIVISTONA spp. Phoenicaceae. **Palm.**

87434. LIVISTONA COCHINCHINENSIS (Blume) Mart.

A slender palm about 50 feet high, with a crown of large, fan-shaped leaves. It is native to Malakka.

87432 to 87436—Continued.

For previous introduction see No. 73247.

87435. LIVISTONA DECIPIENS Beccari.

A fan palm of medium height and a trunk diameter of about 15 inches. The leaves are made up of about 80 segments, which are very weak at the tips, hanging as though wilted. It is native to South Australia.

87436. LIVISTONA INERMIS R. Br.

A moderate-sized fan palm 15 to 30 feet high, closely resembling *L. humilis* except that the petioles are entirely unarmed. It is native to North Australia.

87437 and 87438. GOSSYPIUM BARBADENSE L. Malvaceae. **Sea-island cotton.**

From Egypt. Seeds presented through S. A. Steere, Manager of the Cotton and Fabric Division of the Goodyear Tire & Rubber Co. Received April 18, 1930.

87437. *Giza 3.* Cotton grown in Lower Egypt.

87438. Cotton grown in Upper Egypt.

87439 to 87445. OLEA EUROPAEA L. Oleaceae. **Olive.**

From Fez, Morocco, Africa. Cuttings presented by Mr. Thauvin, Inspector of Agriculture, Mekinez, through Prof. Frederic T. Bioletti, University of California. Received April 22, 1930.

The Meslala, or Mslala, is said to be a fine, large, pickling olive. These cuttings were taken from trees selected for the

87439 to 87445—Continued.

quality and size of crop in olive orchards of the Arabs in the Zerhom region.

87439. No. 3.

87440. No. 15.

87441. No. 4.

87442. No. 13.

87443. No. 14.

87444. No. 12.

87445. No. 16.

87446 and 87447. VITIS VINIFERA L. Vitaceae. **European grape.**

From Tientsin, China. Plants purchased from Lukashik & Sons, First Mail Order Seed House. Received April 22, 1930.

87446. No. 1. Chinese table grape.

87447. No. 2. Chinese table grape.

87448. CHONDRILLA sp. Cichoriaceae.

From Leningrad, Union of Socialistic Soviet Republics. Seeds presented by Dr. Victor Talanoff, Institute of Applied Botany. Received April 23, 1930.

From western China, crop of 1929. A herbaceous perennial related to chicory, which may have value as a rubber plant.

87449 to 87455. VITIS VINIFERA L. Vitaceae. **European grape.**

From Odessa, Little Russia, Union of Socialistic Soviet Republics. Cuttings presented by the Vineyard Experiment Station. Received April 23, 1930.

87449. *Alvarna.*

87450. *Chabach.*

87451. *Kabasma.*

87452. *Koptchak.*

87453. *Plavai.*

87454. *Rka-tzitel.*

87455. *Serektia.*

87456. SACCHARUM sp. Poaceae.

From Cuba. Cuttings collected by H. N. Vinall, Bureau of Plant Industry. Received April 23, 1930.

No. 7. A drought-resistant grass presented by Robert M. Grey, Harvard Botanic Gardens. Of possible value as forage in the Gulf States.

87457. FRAGARIA sp. Rosaceae. **Strawberry.**

From New Westminster, British Columbia, Canada. Plants presented by A. Keir. Received April 24, 1930.

Startler. An ever-bearing strawberry with smooth, bright-red fruits which look as though they had been varnished; the foliage does not grow as strong as Mastodon, nor are the plants quite so prolific, but the fruit ripens quicker and the flavor is better.

87458. SABAL sp. Phoenicaceae. **Palm.**

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, director, experiment station. Received April 25, 1930.

87458—Continued.

A fan-leaved palm said to have come from the island of St. Thomas.

87459 to 87461.

From Urumia, Persia. Seeds presented by Jalil K. Hashimzade. Received April 25, 1930.

87459. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). Amygdalaceae. **Almond.**

A variety grown locally.

87460. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

A late melon with a tough skin, which is stored for winter use.

87461. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

Madjdi. An early melon with a delicate skin, from Karkar, northern part of Persia.

87462 to 87465.

From Cuba. Seeds collected by H. N. Vinall, Bureau of Plant Industry. Received April 25, 1930.

87462. ARECA sp. Phoenicaceae. **Palm.**

No. 8. April 14, 1930. Harvard Botanic Garden. A pinnate-leaved palm said to have come from the Philippine Islands.

67463. HIBISCUS SABDARIFFA L. Malvaceae. **Roselle.**

No. 9. April 14, 1930. Harvard Botanic Garden. Jamaica sorrel or Rozelle hemp. Said to be a substitute for spinach in the Tropics. For trial as greens.

87464. PANICUM MAXIMUM Jacq. Poaceae. **Guinea grass.**

A perennial erect bunch grass 4 to 6 feet high, with open spreading panicles of spikelets. It is a native of Africa, introduced into tropical America where it is cultivated for forage, furnishing pasture and green feed.

For previous introduction see No. 74464.

87465. VIGNA ANTILLANA (Urban) Fawcett and Rendle. Fabaceae. **Cuban cowpea.**

No. 6. A twining vine up to 20 feet long, with trifoliate leaves of ovate leaflets, and purplish flowers an inch across in racemes 4 to 6 inches long. It is native to the West Indies.

87466 to 87469.

From Canberra, Australia. Seeds presented by A. McTaggart, Plant Introduction Officer, Council for Scientific and Industrial Research, Division of Plant Industry. Received April 25, 1930.

87466. LOTUS ANGUSTISSIMUS L. Fabaceae.

An upright, slender-stemmed, leguminous annual, about a foot high, with yellow flowers.

For previous introduction see No. 73393.

87467. LOTUS AUSTRALIS Andrews. Fabaceae.

A perennial legume, shrubby at the base and about 2 feet high, resembling

87466 to 87469—Continued.

L. corniculatus, except that the leaves are narrower and the flowers are usually pink. It is one of the few native pasture-producing legumes in Australia.

87468. TRIFOLIUM CERNUUM Brot. Fabaceae. **Clover.**

An annual clover, less than a foot high, with small heads of pale-purplish flowers. Native to Spain.

87469. TRIFOLIUM GLOMERATUM L. Fabaceae. **Clover.**

This clover is only useful because it grows fairly well in sour soils, low in phosphate content, when these soils first come into cultivation and before other clovers have established themselves.

For previous introduction see No. 53985.

87470 to 87473. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Ayr, Scotland. Tubers presented by Messrs. McGill & Smith (Ltd.). Received April 26, 1930.

Seedling potatoes.

87470. No. 8256.

87471. No. 7252.

87472. No. 42610.

87473. No. 42618.

87474. PARINARI MOBOLA Oliver. Rosaceae.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received April 26, 1930.

A handsome forest tree with dense evergreen foliage. The leaves are deep green above and white beneath, and the fruit, much like an olive in appearance, has an edible kernel in a very hard shell. The hard wood is used for furniture and building purposes.

For previous introduction see No. 50168.

87475 and 87476. RHODODENDRON MARIESII Hemsl. and Wils. Ericaceae.

From Leicester, England. Seeds purchased from Rev. J. Farnworth Anderson. Received April 26, 1930.

A deciduous shrub up to 8 feet high, native to central China, and related to *Rhododendron rhombicum.* The ovate leaves, 2 to 3 inches long, are silky pubescent on the midrib beneath, and the one to three rose-pink, broadly campanulate flowers are 1 to 2 inches across.

For previous introduction see No. 80306.

87475. [No data]

87476. 6907 M. V.

87477. CEIBA PENTANDRA (L.) Gaertn. Bombacaceae. **Kapok.**

From Bataan, Philippine Islands. Seeds received through the Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received April 29, 1930.

Variety *Indica.* From trees grown at the Lamao Experiment Station, Bataan. This variety was introduced into the oriental Tropics in early times and is cultivated most extensively in Java, and next to Java

87477—Continued.

in the Philippine Islands. The trees do not attain the enormous size of those of the parent species in the American Tropics, and they are usually characterized by distinct whorls of horizontal branches. The down, borne in elliptical seed pods 4 to 8 inches long, is resilient, buoyant, and one of the best temperature insulators known. It is used in increasing quantities in matresses, life preservers, and refrigerators.

87478 and 87479. ORYZA SATIVA L. Poaceae. **Rice.**

From Chiengmai, Siam. Seeds presented by Rev. William Harris, The Prince Royalis College. Received April 29, 1930.

The various forms of glutinous rice are the staple diet of the people of northern Siam. Such rice should be thoroughly steamed, after which it becomes soft and is very nutritious.

87478. *Kow lai,* striped rice.

87479. *Kou pha dong,* red stone rice.

87480. VITIS VINIFERA L. Vitaceae. **European grape.**

From Wiener Neustadt, Austria. Cuttings presented by Kober, Rohlfurt & Co. Received April 30, 1930.

Kober 5BB.

87481 and 87482. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Ayr, Scotland. Tubers presented by Messrs. McGill & Smith (Ltd.). Received April 30, 1930

Seedling potatoes.

87481. No. 2273.

87482. No. 14272.

87483 to 87488. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Vienna, Austria. Seeds purchased from Doctor Rogenhofer, Austrian Seed Control Station, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received April 30, 1930.

A collection of Austrian alfalfas.

87483. From Zistersdorf.

87484. From Ziersdorf.

87485. From Laa a. d. Thaya.

87486. From Durnkrut.

87487. From Poysdorf.

87488. From Dobermannsdorf.

87489. CROTALARIA sp. Fabaceae.

From Mayaguez, Porto Rico. Seeds presented by H. T. Cowles, Acting Dean, University of Porto Rico. Received April 30, 1930.

A new crotalaria which may prove useful as forage or as an ornamental in the South. It came originally from Colombia or Peru.

87490 to 87495.

From Madagascar. Seeds presented by Dr. Henri Humbert, Algiers, Algieria. Received June 1, 1930.

87490. DOMBEYA LEUCOMACRANTHA Hochr. Sterculiaceae.

87490 to 87495—Continued.

A small evergreen tree 4 to 7 feet high, with gray hairy branches and densely hairy palmate-cordate leaves 3 or 4 inches long. The solitary, white, axillary flowers are about 2 inches across. Native to Madagascar, where it grows at altitudes between 4,500 and 6,000 feet among rocks in places free from lime.

87491. DODONAEA MADAGASCARIENSIS Radlk. Sapindaceae. **Hopbush.**

A small, subtropical evergreen tree, eventually about 15 feet high, with small, unequally pinnate leaves composed of about 25 linear-lanceolate leaflets. The flowers and fruits are inconspicuous. Native to Madagascar, where the natives use it as a silkworm tree.

87492. MUSA PERRIERI Claverie. Musaceae. **Banana.**

A wild banana from western Madagascar, which forms a large plant about 20 feet high, with a swollen trunk over 3 feet in girth. During the hot season the plant loses its foliage. The small cylindrical fruits, about 8 inches long, are scarcely edible because of the scanty, bitter flesh.

87493. MUSA sp. Musaceae. **Banana.**

A wild banana found in the hot humid forest at altitudes between 5,000 and 6,000 feet, on the shore of Lake Kiwu, Idjwi Island, central Africa.

87494. PITTOSPORUM sp. Pittosporaceae.

Humbert and Swingle No. 5711. An ornamental shrub from lower southeastern Madagascar, a region with a long, dry season and much sunshine.

87495. STEREOSPERMUM sp. Bignoniaceae.

An ornamental shrub, apparently not tolerating lime soils, from the western plains of Madagascar—a warm region with a long, dry season.

87496. BELOU MARMELOS (L.) Lyons (*Aegle marmelos* Correa). Rutaceae. **Bel.**

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens. Received June 3, 1930.

A small spiny tree, originally a native of India, now commonly grown for its fruit in the low country of Ceylon and other tropical countries. The fruit is globular, with a hard, woody, green shell, and varies in size from that of an orange to a large melon. Within is a mass of doughy, aromatic pulp, intermingled with limpid, glutinous substance which some people relish for its flavor. This is a well-known specific for dysentery, and is much used in native medicine.

For previous introduction see No. 43027.

87497 to 87519.

From Cuba. Seeds collected by T. A. Fennell at Harvard Botanic Garden, Soledad, Cienfuegos. Received May 5, 1930.

87497. ALBIZZIA MALACOCARPA Standl. Mimosaceae.

No. 26. A beautiful tall tree having a crown of feathery leaves. **Much used for shade in coffee and cocoa plantations.**

87498. ARECA GLANDIFORMIS Lam. Phoenicaceae. **Palm.**

87497 to 87519—Continued.

No. 19. A slender, spineless, pinnate-leaved palm closely resembling *Linoma* (*Areca*) *alba*. It is native to the Molukka Islands.

For previous introduction see No. 77162.

87499. BARYXYLUM BRASILIENSE (L.) Pierre. Caesalpiniaceae.

No. 34. A tree up to 80 feet high with bipinnate leaves of small leaflets and axillary or terminal racemes of small, yellow flowers. The orange-colored wood is elastic, tough, and durable and takes a fine polish. The tree is native to Central America.

87500. BARYXYLUM INERME (Roxb.) Pierre (*Peltophorum ferrugineum* Benth.). Caesalpiniaceae.

No. 36. A large handsome leguminous tree bearing large terminal spikes of bright-yellow flowers. A good shade tree.

87501. BELOU MARMELOS (L.) Lyons (*Aegle marmelos* Correa). Rutaceae. **Bel.**

No. 13. A heavy fruiting, pear-shaped variety.

For previous introduction see No. 87496.

87502. CALYPTROGYNE OCCIDENTALIS (Swartz) G. Maza. Phoenicaceae. **Palm.**

No. 51. A beautiful and rare native palm with a straight, smooth stem sometimes reaching a height of 50 feet. The pinnate leaves are from 8 to 12 feet long.

87503. CANAVALIA PLAGIOSPERMA Piper. Fabaceae.

No. 28. A luxuriant leguminous climber, used as a cover crop.

For previous introduction see No. 64511.

87504. CANAVALIA RUSIOSPERMA Urban. Fabaceae.

No. 30. A large, climbing perennial with beautiful rose-crimson flowers.

For previous introduction see No. 59307.

87505. CASSIA NODOSA Buch.-Ham. Caesalpinaceae.

No. 43. *Pink and white shower.*

For previous introduction see No. 65732.

87506. CASSIA SPECTABILIS DC. Caesalpiniaceae.

No. 9. A beautiful native leguminous tree bearing numerous terminal clusters of bright-yellow flowers.

87507. CLERODENDRUM ANAFENSE Britt. and P. Wils. Verbenaceae.

No. 38. A Cuban tree 30 feet high, with obovate coriaceous leaves 2 to 4 inches long and clusters of white flowers an inch long.

For previous introduction see No. 77159.

87508. COPAIVA HYMENAEIFOLIA (Moric.) Kuntze. Caesalpiniaceae.

87497 to 87519—Continued.

No. 48. *Quiebrahacha.* One of the hardest timber trees in Cuba, used for posts, bridges, etc., but nearly extinct as it is much prized by charcoal burners. The timber is very heavy and will sink in water. It grows near the coast.

87509. CUPANIA AMERICANA L. Sapindaceae.

No. 39. A Mexican shrub or tree 30 feet high, with compound leaves of oblong, crenate-serrate, pubescent leaflets, and panicles of greenish-white flowers.

87510. ELAEAGNUS PHILIPPENSIS Perr. Elaeagnaceae.

No. 20. A very sweet-scented flowering shrub which grows to be 15 feet in diameter.

For previous introduction see No. 64762.

87511. ESPADAEA AMOENA A. Rich. Solanaceae.

No. 8. A native Cuban tree, very common along the seacoast. The black and yellow wood is very hard and durable, and the fruits are small and bright yellow.

87512. HARRISIA ERIOPHORA (Pfeiff.) Britton. Cactaceae.

No. 45. A tall, subcylindrical-stemmed cactus, native to Cuba. The large white flowers are nocturnal.

87513. HIBISCUS ELATUS Swartz. Malvaceae. **Mountain rosemallow.**

No. 55. A small, spreading tree with broadly cordate, entire leaves, and flowers 4 inches long which open primrose colored in the morning and, as the day advances, change to orange and deep red. It is native to the West Indies.

87514. LUEHEA SPECIOSA Willd. Tiliaceae.

No. 35. A shrub or small tree up to 50 feet high, with cordate, serrate leaves 4 to 10 inches long, pale beneath, and axillary recemes of large, showy white flowers 2 inches across. It is native to Cuba and Mexico.

87515. MONTEZUMA CUBENSIS (Britt. and Wils.) Urban. Bombacaceae.

No. 53. A tree, native to Cuba, which grows 90 feet high; the broadly cordate, coriaceous leaves are 3 to 6 inches long; the small, yellowish-brown flowers are solitary or clustered.

87516. OPERCULINA TUBEROSA (L.) Meisn. (*Ipomoea tuberosa* L.). Convolvulaceae.

No. 11. A perennial, stout-stemmed, herbaceous vine, climbing to the tops of the tallest trees. The leaves are large and compound, with seven oblong leaflets; and three to six yellow flowers are borne on a long peduncle. The fruit is a membranous, globular capsule, about an inch long, containing two to four large seeds which are covered with short, black hairs. It is native to Brazil.

For previous introduction see No. 45888.

87517. PSIDIUM POLYCARPON Lamb. Myrtaceae. **Guava.**

No. 37. A relative of *P. guajava* to which it is very similar, although the leaves are larger and more pubescent; the fruit is of medium size and of good quality.

87518. SOLANUM PIERREANUM Paill. and Bois. Solanaceae.

No. 1. A small sweet pepper with bright-scarlet fruits which are ornamental as well as edible.

For previous introduction see No. 54695.

87519. TRACHYLOBIUM VERRUCOSUM (Gaertn.) Oliver. Caesalpiniaceae.

No. 6. The copal tree of Madagascar. The Bauhinialike flowers are large and white.

For previous introduction see No. 66246.

87520. BAUHINIA MALABARICA Roxb. Caesalpiniaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received May 5, 1930.

A small, erect, bushy tree, with thick, rigid, deeply bifid, somewhat heart-shaped leaves 2 or 3 inches long. The small, white flowers are in dense, sessile, axillary clusters. The rather turgid, straight, firm, narrow pods are a foot long. Its native habitat is the mountainous country of northeastern India.

For previous introduction see No. 80042.

87521 and 87522.

From Miyazaki, Japan. Seeds and roots presented by F. Oshiumi, Agricultural Experiment Station, Miyazaki, Kawa-Minami Branch. Received May 5, 1930.

87521. BOEHMERIA NIVEA (L.) Gaud. Urticaceae. **Ramie.**

Roots of several varieties which have been improved by selection.

87522. CANNABIS SATIVA L. Moraceae. **Hemp.**

Seeds of several varieties which have been improved by selection.

87523 to 87636. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Japan and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

87523. No. 3642. *Kazusa,* from the Tamai Branch Experiment Station, Saitama Ken, Japan, March 24, 1930. A medium-sized, oval, light-yellow bean with russet-brown hilum.

87524. No. 3806. From a bean-curd factory, Tokyo, February 12, 1930. A mixture of yellow and greenish-yellow varieties from Manchuria which are used in the manufacture of soybean curd.

87525. No. 4248. *Daizuohigu,* from the Ikimawa Ken Agricultural Experiment Station, Nawa, Ikimawa Ken, Japan, March 10, 1930. A medium-sized, yellowish green, oval bean with large, dark-brown hilum; used for green manure.

87523 to 87636—Continued.

87526 to 87529. From the Soya Agricultural Experiment Station, Makubetsu, Wakkanai, Hokushu, Japan, March 18, 1930.

87526. No. 4269. *Wase hadaka* (early smooth). A medium-sized, oval, yellow bean with brown hilum. This is an early nonpubescent variety.

87527. No. 4270. *Shimo shirazu.* A medium-sized, oval, yellow bean with brown hilum.

87528. No. 4271. *Kenashidaizu* (smooth). A medium-small, oval, yellow bean with brown hilum.

87529. No. 4272. *Oyachi No. 1.* A medium-sized, oval, yellow bean with brown hilum.

87530 and 87531. From the Sendai Miso Manufactory, Tokyo, Japan, March 18, 1930.

87530. No. 4273. *Seishin, Chosen.* A mixture of yellow-seeded varieties from Chosen which are used in the manufacture of Sendai miso.

87531. No. 4274. A mixture of yellow-seeded varieties from Manchuria which are used in the manufacture of Sendai miso.

87532 to 87621. From Chosen. Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

87532 to 87566. From Heian Nando.

87532. No. 4808. *Heijo,* from the Ryugakumen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87533. No. 4809. *Yagi,* from Ryugakumen. A medium-sized, nearly round, glossy, yellow bean with large, russet-brown hilum.

87534. No. 4810. *Hokushu,* from Fusanmen. A medium-sized, oval, glossy, yellow bean with light-slate hilum.

87535. No. 4811. *Yotoku,* from Yotokumen. A large, nearly round, glossy, yellow bean with light russet-brown hilum.

87536. No. 4812. *Komuzonkon,* from Fusanmen; a very large, oval, glossy, black bean with yellow germ.

87537. No. 4813. *Otashu,* from Daidokomen. A large, oval, glossy, yellow bean with russet-brown hilum.

87538. No. 4814. *Osaishu,* from Daidokomen; a medium-oval, yellow bean with brown hilum.

87539. No. 4815. *Chonkeibi,* from Geunanmen; a medium-sized, oval, green bean with slate-black hilum and green germ.

87540. No. 4816. *Horabikon,* from Kosenmen; a medium-large, black, oval bean with black germ.

87541. No. 4817. *Shosekioshu* (small, red, yellow), from Kosenmen; a small, nearly round, cinnamon-brown bean which may be of value for sprouts.

87523 to 87636—Continued.

87542. No. 4818. *Sodarikon,* from Geunanmen. A large, nearly round, glossy, yellow bean with light-brown hilum.

87543. No. 4819. *Orukon,* from Geunanmen; a large, nearly round, glossy, yellow bean with light russet-brown hilum.

87544. No. 4820. *Kugatsuta* (September), from Bensanmen; a mixture of yellow-seeded varieties.

87545. No. 4821. *Zairai pakute,* from Mosanmen; a medium-large, oval, glossy, yellow bean with pale hilum.

87546. No. 4822. *Komu chiunorikon* (black mouth), from Kotomen. A medium-sized, oval, slightly flattened, glossy, black bean with yellow germ.

87547. No. 4823. *Ryuganta,* from Mozanmen. A medium-sized, nearly round, glossy, yellow bean with black hilum.

87548. No. 4824. *Kakujikon,* from Mozanmen. A medium-small, oval, deep glossy yellow bean with light-brown hilum.

87549. No. 4825. *Gishutansen,* from Shikeimen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87550. No. 4826. *Kirugunkon,* from Shikeimen. A medium-small, oval, greenish-yellow bean with light russet-brown hilum and yellow germ.

87551. No. 4827. *Zangukon,* from Shikeimen. A medium-sized, oval, black bean marked with brown concentric rings.

87552. No. 4828. *Oryumokuta* (yellow dragon's eye), from Shikeimen. A medium-sized, oval, deep glossy yellow bean with large, dark-brown hilum.

87553. No. 4829. *Puruputtei,* from Joganmen. A medium-large, oval, green bean with black hilum and green germ.

87554. No. 4830. *Pakute,* from Seisenmen. A medium-large, oval, yellow bean with pale hilum.

87555. No. 4831. *Purute,* from Seisenmen. A medium-large, oval, green bean with black hilum and green germ.

87556. No. 4832. *Kuruchon meitifukukon,* from Taikyumen. A medium-large, oval, glossy, black bean with yellow germ.

87557. No. 4833. *Ankeizajikon,* from Taikyumen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87558. No. 4834. *Burukon,* from Taikokumen. A medium-sized, oval, slightly flattened, yellowish-brown bean.

87559. No. 4835. *Panta* (spotted bean), from Taikokumen. A medium-large, mottled green and black bean with black hilum and yellow germ.

87523 to 87636—Continued.

87560. No. 4836. *Norangutapari,* from Joganmen. A mixture of yellow and greenish-yellow varieties.

87561. No. 4837. *Sekishoku zunonikon,* from Dajimen. A small, nearly round, dark, glossy, brown bean.

87562. No. 4838. *Korubikukon,* from Sanwamen. A medium-small, oval, slightly flattened, yellowish-green bean with black hilum.

87563. No. 4839. *Pakuta,* from Junsenmen. A medium-large, oval, glossy, yellow bean with pale hilum.

87564. No. 4840. *Batakukon,* from Junsenmen. A medium-sized, oval, yellow bean with pale hilum.

87565. No. 4841. *Antashu,* from Junsenmen. A mixture of black, brown, yellow, and yellow and black beans.

87566. No. 4842. *Hinkon,* from Junsenmen. A very large, oval, yellow bean with light-brown hilum.

87567 to 87582. From Heian Hokudo.

87567. No. 4843. *Heihokuta,* from Tozanmen. A large, oval, glossy, yellow bean with pale hilum.

87568. No. 4844. *Hakkasota* (early white flower), from Unzanmen. A medium-sized, oval, glossy, yellow bean with brown hilum.

87569. No. 4845. *Kuromokuta* (black eye), from Kankamen. A medium-sized, oval, glossy, yellow bean slightly mottled with black, which has a black eye.

87570. No. 4846. *Shoryu pakute,* from Unzanmen. A medium-sized, oval, light-yellow bean with pale hilum.

87571. No. 4847. *Kokukaku,* from Gakusenmen. A medium-sized, nearly round, light-yellow bean with pale hilum.

87572. No. 4848. *Purute,* from Gohokumen. A medium-sized, oval, greenish-yellow bean with green germ.

87573. No. 4849. *Kurome souta* (early blackeye), from Shojomen. A medium-sized, nearly round, yellow bean with brown hilum.

87574. No. 4850. *Shoryushota* (small early), from Kabetsumen. A medium-sized, oval, light-yellow bean with a small brown spot at the end of the pale hilum. It is very similar to *Ito san* (No. 17268).

87575. No. 4851. *Kuromepakuta,* from the Hekidomen. A large, oval, deep glossy yellow bean with large black hilum.

87576. No. 4852. *Purute,* from Kokanmen. A medium-large, oval, yellowish-green bean with brown hilum and green germ.

87577. No. 4853. *Togomata,* from Rigenmen. A large, oval, slightly flattened, black bean with the testa split into fine white network.

87523 to 87636—Continued.

87578. No. 4854. *Komuten orukon,* from Gohomen. A medium-small, much flattened, black bean with yellow germ.

87579. No. 4855. *Kokuta,* from Teimen. A medium-large, nearly round, glossy, black bean.

87580. No. 4856. *Mikeikon,* from Hakuryomen. A large, oval, brown bean with yellow germ.

87581. No. 4857. *Noruntakubuchi,* from Shinmen. A small, nearly round, light-yellow bean with russet-brown hilum.

87582. No. 4858. *Chumokuta* (mouse eye), from Rigenmen. A very small, cinnamon-brown bean which should be of value for sprouts.

87583 to 87605. From Kogendo.

87583. No. 4859. *Kongodairyu* (Kongo large), from Gakyomen. A large, oval, glossy, yellow bean with pale hilum.

87584. No. 4860. *Kongoshoryu* (Kongo small), from Katsumatsumen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87585. No. 4861. *Ginta* (silver), from Isenmen. A medium-sized, oval, light-yellow bean with russet-brown hilum.

87586. No. 4862. *Kirugunte* (sprout bean), from Shitomen. A medium-sized, oval, glossy, cloudy (brown) yellow bean with pale hilum.

87587. No. 4863. *Kyonenshirazu,* from Kinkamen. A medium-small, oval, light-yellow bean with pale hilum.

87588. No. 4864. *Keimeita* (cock's crown), from Shigomen. A medium-sized, oval, glossy, yellow bean with dark-brown hilum.

87589. No. 4865. *Ota* (yellow bean), from Hakumen. A very large, oval, glossy, yellow bean with slate-black hilum.

87590. No. 4866. *Mitta,* from Tetsugenmen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87591. No. 4867. *Kankota,* from Heikomen. A medium-sized, oval, light-yellow bean with pale hilum.

87592. No. 4868. *Zatta,* from Tonnaimen. A medium-large, oval, glossy, light-brown bean with pale hilum.

87593. No. 4869. *Saizu,* from Ikokumen. A small, nearly round, light-yellow bean with russet-brown hilum. It may be of value for sprouts.

87594. No. 4870. *Saizu,* from Seishimen. A very small, round, deep glossy yellow bean with black hilum. It should be an excellent variety for sprouting.

87595. No. 4871. *Purukon* (green bean), from Ojomen. A medium-small, oval, slightly flattened, greenish yellow bean with yellow germ. A few of the beans have a green germ.

87523 to 87636—Continued.

87596. No. 4872. *Purukonte* (green bean), from Gusenmen. A medium-large, oval, deep glossy green bean with slate-black hilum and a green germ.

87597. No. 4873. *Bamikon,* from Kiraimen. A very large oval, slightly flattened, glossy, yellowish-brown bean with the testa slightly split and the germ yellow.

87598. No. 4874. *Himazu* (castor-bean), from Hanpumen. A medium-large, oval, glossy, black bean with the testa more or less split in white markings, germ yellow.

87599. No. 4875. *Osokutota,* from Neietsumen. A medium-large, oval, dull-brown bean with yellow germ.

87600. No. 4876. *Komujonkon,* from Ojomen. A large round, flattened, glossy, black bean with yellow germ.

87601. No. 4877. *Banta* (late variety), from Neietsumen. A large, oval, glossy, yellow bean with pale-brown hilum.

87602. No. 4878. *Bamukon,* from Yunhakumen. A large, oval, slightly flattened, glossy, brown bean with yellow germ.

87603. No. 4879. *Banta* (spotted bean), from Seimen. A medium-sized, oval, glossy, yellow bean with black saddle.

87604. No. 4880. *Hanaalukon;* from Gusenmen. A large, oval, glossy, yellow bean with light-brown hilum; testa slightly split.

87605. No. 4881. From Ikokumen. A medium-sized, oval, cloudy, brownish-yellow bean with brown hilum.

87606 to 87612. From Kankyo Nando.

87606. No. 4882. *Oiarukon,* from Choyomen. A large oval, glossy, yellow bean with pale hilum.

87607. No. 4883. *Anpenkon,* from Eickimen. A large, oval, light-yellow bean with pale hilum.

87608. No. 4884. *Tansenusudo,* from Hadomen. A large, oval, glossy, greenish-yellow bean with pale hilum and green germ.

87609. No. 4885. *Orugibara Teikon,* from Kosenmen. A medium-sized, oval, glossy, yellow bean with pale hilum.

87610. No. 4886. *Murukon,* from Sensaimen. A medium-sized, oval, glossy, light-yellow bean with pale hilum.

87611. No. 4887. *Rikankon,* from Shimo Kisenmen. A medium-sized. oval, yellow bean with pale hilum.

87612. No. 4888. *Tansenpakude,* from Tennanmen. A very large, oval, glossy, yellow bean with pale hilum.

87613 to 87621. From Kankyo Hokudo.

87613. No. 4889. *Oiarukon,* from Joshinguh. A very large, nearly round, glossy, yellow bean with pale hilum.

87523 to 87636—Continued.

87614. No. 4890. *Tsurunoko,* from Dojogun. A medium-sized, oval, glossy, yellow bean with pale hilum.

87615. No. 4891. *Shirobana* (large-white flower), from Dojogun. A very large, oval, glossy, yellow bean with pale hilum.

87616. No. 4892. *Usuao* (light green), from Kissengun. A medium-sized, oval, greenish-yellow bean with yellow germ.

87617. No. 4893. *Miyongaikon,* from Dojogun. A medium-large, oval, glossy, yellow bean with a pale hilum that has a brown speck at one end.

87618. No. 4894. *Chameshoryu,* from Dojogun. A medium-small, nearly round, glossy, yellow bean with russet-brown hilum.

87619. No. 4895. *Shiromeshoyru* (white eye, small) from Dojogun. A medium-sized, oval, glossy, yellow bean with pale hilum.

87620. No. 4896. *Kuromeshoryu* (small black eye), from Dojogun. A medium-sized, oval, glossy, yellow bean with black hilum.

87621. No. 4897. *Fukute,* from Kikkaeagun. A large oval, glossy, black bean with green germ.

87622 to 87636. From the Saitama Ken, Tamai Branch Experiment Station, Tamai, Japan, March 24, 1930.

87622. No. 5630. *Onihadaka* (naked devil). A medium-sized, oval, yellow bean with brown hilum.

87623. No. 5631. *Suzunari saki No. 1* (bunch saki). A medium-small, oval, yellow bean with brown hilum.

87624. No. 5632. *Sennarikimusume.* A medium-sized, oval, light-yellow bean with brown hilum.

87625. No. 5633. *Shirohana saki No. 1* (white flower saki No. 1). A medium-sized, oval, light-yellow bean with pale hilum.

87626. No. 5634. *Takiya No. 3.* A medium-small, oval, light-yellow bean with pale hilum.

87627. No. 5635. *Kimusume* (maid). A medium-sized, oval, glossy, light-yellow bean with brown hilum.

87628. No. 5637. *Keburi.* A medium-sized, oval, light-yellow bean with brown hilum.

87629. No. 5638. *Ashai* (morning sun). A medium-sized, oval, light-yellow bean with light-russet to brown hilum.

87630. No. 5639. *Chizuka.* A medium small, oval, glossy, yellow bean with brown hilum.

87631. No. 5640. *Kindaizu* (golden soybean). A medium-sized, oval, light-yellow bean with brown hilum.

87632. No. 5641. *Shirohadaka* (white smooth). A medium-sized, oval, light-yellow bean with brown hilum; a nonpubescent variety.

87633. No. 5643. *Kobata.* A medium-sized, oval, greenish-yellow bean with pale-brown hilum and yellow germ.

87523 to 87636—Continued.

87634. No. 5644. *Mizukuguri* (through the water). A medium-sized, oval, light-yellow bean with brown hilum.

87635. No. 5645. *Ogimame* (fan). A medium-small, nearly round, light-yellow bean with dark-brown hilum.

87636. No. 5646. *Maruganyaku* (pill). A small, oval, green bean with black hilum and green germ. It may be of value for sprouts.

87637. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

From Pretoria, Union of South Africa. Seeds presented by N. B. Davis, Estates Manager, Union Canning Co. (Ltd.), at the request of Prof. H. Clark Powell, Transvaal University College. Received May 12, 1930.

Transvaal yellow clingstone peaches.

87638. PINUS PUTULA Schlecht. and Cham. Pinaceae. Pine.

Received April , 1930, without information.

A tree up to 75 feet high, with the upper part of the trunk red. The branches are long and slender, the slender drooping leaves are 6 to 12 inches long, and the persistent, dark brown cones are reflexed. It is native to the central plateau region of Mexico.

87639 to 87644. AVENA SATIVA L. Poaceae. Oats.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

87639. No. 4521. From Keikido. *Enbaku.* Small, slender, mixed black and white seeds, but mostly black.

87640. No. 5432. *Enbaku,* from Heian Hokudo.

87641. No. 5458. *Enbaku,* from Kogendo.

87642. No. 5487. *Victoria,* from Kankyo Nando.

87643. No. 5488. *Hozan zairai,* from Kankyo Nando.

87644. No. 5506. *White Belgian,* from Kankyo Hokudo.

87645 to 87702. CHAETOCHLOA ITALICA (L.) Scribn. (*Setaria italica* Beauv.). Poaceae. Millet.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

87645 to 87648. From Zenra Nando.

87645. No. 4727. *Mochiawa.*

87646. No. 4728. *Nenjitsu.*

87647. No. 4729. *Tenjitsu.*

87648. No. 4730. *Mozo.*

87645 to 87702—Continued.

87649. No. 4789. *Chonguchongumi,* from Chusei Nando.

87650. No. 5009. *Awa zairai shu,* from Zenra Hokudo.

87651 to 87667. From Keisho Hokudo.

87651. No. 5201. *Fomuhaumhongugari.*

87652. No. 5202. *Mongutangugori.*

87653. No. 5203. *Taubamagori.*

87654. No. 5204. *Nekoachi* (cat's-feet millet).

87655. No. 5205. *Nutsu lamuankochii.*

87656. No. 5206. *Kyonenshirogu.*

87657. No. 5207. *Kaukoshu.*

87658. No. 5208. *Choencho.*

87659. No. 5209. *Burugunte.*

87660. No. 5210. *Sojukyorawa.*

87661. No. 5211. *Sekezu.*

87662. No. 5212. *Manshu.*

87663. No. 5213. *Shiroku.*

87664. No. 5214. *Gojunichishu* (50 days).

87665. No. 5215. *Takebaawa* (bamboo-leaf millet).

87666. No. 5216. *Mupureshu.*

87667. No. 5217. *Facho.*

87668. No. 5270. *Awa,* from Keisho Nando.

87669. No. 5293. *Awa hendenhoanjoumil* (Italian millet), from Kokaido.

87670. No. 5500. *Shin,* from Kankuo Hokudo.

87671 to 87698. From Heian Nando.

87671. No. 5358. *Burukunteihoanchomi.*

87672. No. 5359. *Hintehoanchiyo.*

87673. No. 5360. *Akagukishato.*

87674. No. 5361. *Shivogukishato.*

87675. No. 5362. *Chongutongumi.*

87676. No. 5363. *Akanozo.*

87677. No. 5364. *Kiitongumi.*

87678. No. 5365. *Gojjikoku* (25 bushel).

87679. No. 5366. *Mejizo.*

87680. No. 5367. *Kokaido.*

87681. No. 5368. *Shoshi.*

87682. No. 5369. *Beikokushu.*

87683. No. 5370. *Karuzo.*

87684. No. 5371. *Awa.*

87685. No. 5372. *Parizo.*

87686. No. 5373. *Moreizo.*

87687. No. 5374. *Keizo.*

87688. No. 5375. *Tatsuokashu.*

87689. No. 5376. *Muruchari.*

87690. No. 5377. *Orumusokui.*

87691. No. 5378. *Banguchizo.*

87692. No. 5379. *Keimizo.*

87693. No. 5380. *Zukorichiyama.*

87645 to 87702—Continued.

87694. No. 5381. *Nongugamuzo.*

87695. No. 5382. *Kozanguzo.*

87696. No. 5383. *Meikiruzo.*

87697. No. 5384. *Hintei.*

87698. No. 5385. *Toyajizo.*

87699 and 87700. From Heian Hokudo.

87699. No. 5425. *Akaguki* (red straw).

87700. No. 5426. *Shivoguki* (white straw).

87701. No. 5452. *Awa,* Italian millet, from Kogendo.

87702. No. 5480. *Itoko,* from Kankyo Nando.

87703 to 87718. ECHINOCHLOA CRUSGALLI EDULIS Hitchc. Poaceae.

Japanese millet.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930. Varieties of barnyard millet.

87703. No. 4705. *Hie,* from Chusei Hokudo.

87704. No. 4963. *Hie zairai shu* (barn grass, millet). A native variety from Zenra Hokudo.

87705. No. 4964. *Hie zairai shu* (barn millet). A native variety from Zenra Hokudo.

87706 to 87709. From Keisho Hokudo.

87706. No. 5255. *Hie* (barn grass).

87707. No. 5256. *Hie* (barn grass)

87708. No. 5257. *Tadorakupii.*

87709. No. 5259. *Chiyukupii.*

87710. No. 5267. *Hie,* from Keisho Nando.

87711. No. 5297. *Hie chanepii,* from Kokaido.

87712 and 87713. From Heian Nando.

87712. No. 5329. *Charupii.*

87713. No. 5330. *Yunboushu.*

87714. No. 5456. *Hie,* from Kogendo.

87715. No. 5504. *Zairai shu.* A native variety, from Kankyo Hokudo.

87716. No. 5430. *Hie aobie* (green barn grass), from Heian Hokudo.

87717. No. 5485. *Tansen zairai* (native tansen), from Kankyo Nando.

87718. No. 5258. *Zazeri,* from Keisho Hokudo.

87719 to 87735. FAGOPYRUM ESCULENTUM Moench. Polygonaceae.

Buckwheat.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, Chosen, March 10, 1930.

87719 to 87735—Continued.

87719. No. 4795. *Soba,* from Chusei Nando, Chosen.

87720. No. 4999. *Zairai shu,* from Zenra Hokudo.

87721. No. 5002. *Soba zairai shu,* from Zenra Hokudo.

87722. No. 5199. *Maku baku,* from Keisho Hokudo.

87723. No. 5200. *Hakaku soba,* from Keisho Hokudo.

87724. No. 5263. *Kome soba,* from Keisho Hokudo.

87725. No. 5274. *Soba* from Keisho Nando.

87726. No. 5298. *Nalsu soba* (summer buckwheat), from Kokaido.

87727 to 87732. From Heian Nando.

87727. No. 5331. *Merumomiru.*

87728. No. 5332. *[illegible]rumomiru.*

87729. No. 5333. *[illegible]izajoshu* (original variety).

87730. No. 5334. *[illegible]6ijo shu.*

87731. No. 5335. *Zairai shu.*

87732. No. 5431. *So[illegible]a,* from Heian Hokudo.

87733. No. 5457. *So[illegible]la* from Kogendo.

87734. No. 5486. *Kozan zairai,* from Kankyo Nando.

87735. No. 5505. *Nagano,* from Kankyo Hokudo.

87736 to 87743. GOSSYPIUM spp. Malvaceae.

Cotton.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

87736 and 87737. GOSSYPIUM HIRSUTUM L.

Upland cotton.

87736. No. 4907. *Zairai shu,* from Chusei Nando.

87737. No. 5266. *Rikuchi men,* from Keisho Nando.

87738 to 87742. GOSSYPIUM NANKING Meyen.

87738. No. 4906. *Rikuchi men,* from Chusei Nando.

87739. No. 5154. *Wato zairai shu,* from Keisho Hokudo.

87740. No. 5155. *Wato zairai,* from Keisho Hokudo.

87741. No. 5299. *Wato,* from Kokaida.

87742. No. 5438. *Wato,* white cotton from Heian Nando.

87743. GOSSYPIUM sp.

No. 5156. *Wato zairai shu,* from Keisho Hokudo.

87744 to 87783. HORDEUM VULGARE COELESTE L. Poaceae.

Six-rowed barley.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural

87744 to 87783—Continued.

explorers, Bureau of Plant Industry. Received May 6, 1930.

Received March 10, 1930, through the Bureau of Industry, Government General, Keijo.

87744 to 87751. Originally from Zenra Nando.

87744. No. 4759. *Hadaka mugi.*

87745. No. 4760. *Hadaka mugi.*

87746. No. 4761. *Sarutongu pori.*

87747. No. 4762. *Hadaka mugi.*

87748. No. 4763. *Changuosaru pori.*

87749. No. 4764. *Hadaka mugi.*

87750. No. 4765. *Hadaka mugi.*

87751. No. 4766. *Kozan.*

87752. No. 4791. *Hadaka mugi,* from Chusei Nando.

87753. No. 5058. *Uosaru pori.*

87754. No. 5059. *Tongusaru pori.*

87755. No. 5060. *Hadaka mugi.*

87756. No. 5061. *Hadaka mugi.*

87757. No. 5062. *Hadaka mugi.*

87758. No. 5063. *Hadaka mugi.*

87759. No. 5064. *Hadaka mugi.*

87760. No. 5065. *Hadaka mugi.*

87761. No. 5066. *Hadaka mugi.*

87762. No. 5067. *Tonsaru pori.*

87763. No. 5068. *Tonsaru pori.*

87764. No. 5069. *Tonsaru pori.*

87765. No. 5070. *Hadaka mugi.*

87766. No. 5071. *Dohadaka.*

87767. No. 5072. *Onihadaka.*

87768. No. 5073. *Hakudo.*

87769 to 87777. From Keisho Hokudo.

87769. No. 5243. *Haru maki shu.*

87770. No. 5244. *Aki maki shu.*

87771. No. 5245. Seed appears to have a slight bluish cast.

87772. No. 5246. *Waseshu,* an early variety.

87773. No. 5247. *Saru bori.*

87774. No. 5248. *Hegachi hadoka.*

87775. No. 5249. *Shemabara.*

87776. No. 5250. *Rokkakudo mugi* (hexagon naked barley).

87777. No. 5251. *Sojikubaku* (early season).

87778. No. 5268. *Hadaka mugi,* from Keisha Nando.

87779. No. 5292. *Hadaka mugi,* from Kokaido, Chosen.

87780 to 87782. From Heian Nando.

87780. No. 5387. *Hadaka mugi* (naked barley).

87781. No. 5388. *Norangu bori.*

87782. No. 5389. *Zairaiyojo.*

87783. No. 5451. *Hakada mugi,* from Koendo, Chosen.

87784 to 87844. HORDEUM VULGARE PALLIDUM Seringe. Poaceae.

Six-rowed barley.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received March 10, 1930, through the Bureau of Industry, Government General, Keijo, Chosen.

87784 to 87789. From Zenra Nando, Chosen.

87784. No. 4767. *Warabe.*

87785. No. 4768. *Mura mugi.*

87786. No. 4769. *Nuru pori.*

87787. No. 4771. *Tong pori.*

87788. No. 4772. *Baitori.*

87789. No. 4773. *Baitori.*

87790 to 87798. From Zenra Hokudo, Chosen.

87790. No. 5038. *Tongu katsu pori.*

87791. No. 5039. *Uotongu pori.*

87792. No. 5040. *Omugi zairai shu.*

87793. No. 5043. *Omugi zairai shu.*

87794. No. 5046. *Noru bori.*

87795. No. 5048 *Omugi zairai shu.*

87796. No. 5050. *Omugi zairai shu.*

87797. No. 5053. *Shun baku* (spring barley).

87798. No. 5054. *Omugi zairai shu.*

87799 to 87833. From Keisho Hokudo, Chosen.

87799. No. 5164. *Haru maki shu* (spring sown).

87800. No. 5165. *Okimaki shu* (fall sown).

87801. No. 5166. *Okimaki mugi.*

87802. No. 5167. *Omugi.*

87803. No. 5168. *Okimaki shu* (fall sown).

87804. No. 5169. *Denrai baku.*

87805. No. 5170. *Omugi.*

87806. No. 5171. *Omugi.*

87807. No. 5172. *Omugi.*

87808. No. 5173. *Subaku.*

87809. No. 5174. *Shiuka kushu* (Chinese variety).

87810. No. 5175. *Obaku.*

87811. No. 5176. *Omugi.*

87812. No. 5177. *Nurun bori.*

87813. No. 5178. *Horu O mugi* (spring barley).

87814. No. 5179. *Horu maki shu* (spring barley).

87815. No. 5180. *Tongu bori.*

87816. No. 5181. *Akim aki mugi.*

87817. No. 5182. *Dobaku.*

87818. No. 5183. *Norangu bori.*

87819. No. 5184. *Keiroku.*

87820. No. 5185. *Chiyorure bori.*

87784 to 87844—Continued.

87821. No. 5186. *Dobaku.*

87822. No. 5187. *Bomu bori.*

87823. No. 5188. *Sanbaku.*

87824. No. 5189. *Nuru bori.*

87825. No. 5190. *Bai tori.*

87826. No. 5191. *Neudo baku.*

87827. No. 5192. *Tongu bori.*

87828. No. 5193. *Nuru bori.*

87829. No. 5194. *Rokkaku tongu bori.*

87830. No. 5195. *Nuru bori.*

87831. No. 5196. *Kenroku.*

87832. No. 5197. *Tongu bori.*

87833. No. 5198. *Kocau baku.*

87834. No. 5276. *Omugi,* from Keisho Nando.

87835. No. 5290. *Omugi kauru pori,* from Kokaido.

87836 to 87840. From Heian Nando, Chosen.

87836. No. 5396. *Harumaki zairai shu* (spring sown).

87837. No. 5397. *Mekumo bori.*

87838. No. 5398. *Harumaki rokkaku* (spring sown, hexagon).

87839. No. 5399. *Karu bori.*

87840. No. 5400. *Noru bori.*

87841. No. 5424. *Zairai omugi* (native barley), from Heian Hokudo.

87842. No. 5449. *Omugi,* from Kogeudo, Chosen.

87843. No. 5478. *Se rokkoku* (hexagon), from Kankyo Nando.

87844. No. 5499. *Kubi* (dog's-tail barley), from Kankyo Hokudo.

87845 to 87905. ORYZA SATIVA L. Poaceae. **Rice.**

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, Chosen, March 10, 1930.

87845 to 87854. Paddy rice, from Chusei Nando, Chosen.

87845. No. 4774. *Haya shinriki.*

87846. No. 4775. *Tama nishiki.*

87847. No. 4776. *Kokura miyako.*

87848. No. 4777. *Nishiki.*

87849. No. 4778. *Naka shinriki.*

87850. No. 4780. *Suzuki shinriki.*

87851. No. 4781. *Omachi.*

87852. No. 4782. *Ban shinriki.*

87853. No. 4785. *Sekizanso.*

87854. No. 4786. *Wase.*

87855. No. 4787. *Annan so.* Upland rice, from Chusei Nando.

87856. No. 4924. *Gohya kuso.* Paddy rice, from Zenra Hokudo.

87845 to 87905—Continued.

87857. No. 5269. *Suito.* Paddy rice, from Keisho Nando.

87858. No. 5280. *Rikuto.* Upland rice, from Keisho Nando.

87859 to 87861. Paddy rice, from Kokaido.

87859. No. 5283. *Suito henode.*

87860. No. 5284. *Suito yostugashira.*

87861. No. 5285. *Suito hakuso.*

87862. No. 5286. *Geisha girl.* Upland rice, from Kokaido.

87863 to 87871. Paddy rice from Heian Nando.

87863. No. 5311. *Hinode.*

87864. No. 5312. *Kamenoo.*

87865. No. 5313. *Taikyu.*

87866. No. 5314. *Muso.*

87867. No. 5315. *Nanto.*

87868. No. 5316. *Aikoku.*

87869. No. 5317. *Chikuso.*

87870. No. 5318. *Adachiso.*

87871. No. 5319. *Junanchorubei.*

87872 to 87880. Upland rice, from Heian Nando.

87872. No. 5320. *Junanmochi.* Glutinous.

87873. No. 5321. *Asasa.*

87874. No. 5322. *Oiran* (geisha girl).

87875. No. 5323. *Yunboushu.*

87876. No. 5324. *Mubonshu.*

87877. No. 5325. *Komutongu teimamuzo.*

87878. No. 5326. *Taikyu.*

87879. No. 5327. *Rikuto.*

87880. No. 5328. *Zotonguzo.*

87881 and 87882. Paddy rice, from Heian Hokudo.

87881. No. 5433. *Kamenoo.*

87882. No. 5434. *Sekizan.*

87883. No. 4784. *Yakuba shinriki.* Paddy rice, from Chusei Nando.

87884 and 87885. Upland rice, from Heian Hokudo.

87884. No. 5435. *Asaga.*

87885. No. 5436. *Kaneko.*

87886. No. 5437. *Konkobo.* Upland rice, from Heian Nando.

87887 to 87897. Paddy rice, from Kogendo, Chosen.

87887. No. 5459. *Nishiki.*

87888. No. 5460. *Henode* (sun rice).

87889. No. 5461. *Kamenoo* (tortoise tail).

87890. No. 5462. *Tama nishiki.*

87891. No. 5463. *Sekizan.*

87892. No. 5464. *Isechinko.*

87893. No. 5465. *Bakuso.*

87894. No. 5466. *Rokutoto kuowon* (mung-bean rice).

87845 to 87905—Continued.

87895. No. 5467. *Rojinto* (old-man rice).

87896. No. 5468. *Hakusenso.*

87897. No. 5469. *Kaneko.* Upland rice, from Kogendo.

87898 to 87900. Paddy rice, from Kankyo Nando.

87898. No. 5489. *Kamenoo* (tortoise tail).

87899. No. 5490. *Hinode* (sunrise).

87900. No. 5491. *Wase Ouno* (Ouno's early).

87901. No. 5492. *Kaneko.* Upland rice, from Kankyo Nando.

87902 and 87903. Paddy rice, from Kankyo Hokudo.

87902. No. 5508. *Odashero No. 5.*

87903. No. 5509. *Ikashi wase,* an early variety.

87904 and 87905. Upland rice, from Kankyo Hokudo.

87904. No. 5510. *Honen wase* (large crop, early).

87905. No. 5511. *Kauto zairai.*

87906 to 87931. PANICUM MILIACEUM L. Poaceae. **Proso.**

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received March 10, 1930, through the Bureau of Industry, Government General, Keijo.

87906. No. 5503. *Indian millet,* from Kankyo Hokudo.

87907 to 87909. From Chusei Hokudo.

87907. No. 4596. *Yellow chichiangu.*

87908. No. 4597. *White chichiangu.*

87909. No. 4598. *Yellow chichiangu.*

87910. No. 5429. *Shirokibi,* from Heian Hokudo.

87911. No. 5455. *Kibi,* from Kodendo.

87912. No. 5484. *Tansen zairai,* from Kankyo Nando.

87913. No. 4268. *Mochikibi,* from Zenra Nando.

87914 to 87922. From Zenra Hokudo.

87914. No. 5074. *Kibi zairai shu.*

87915. No. 5075. *Kibi zairai shu.*

87916. No. 5076. *Mebuji changu.*

87917. No. 5077. *Kurokibi.*

87918. No. 5078. *Kibi zairai shu.*

87919. No. 5079. *Kibi zairai shu.*

87920. No. 5080. *Kibi zairai shu.*

87921. No. 5081. *Karasu kibi* (crow millet).

87922. No. 5082. *Kibi zairai shu.*

87923 to 87925. From Keisho Hokudo.

87923. No. 5252. *Shira cheasuki zaugu.*

87924. No. 5253. *Su su* (Indian millet).

87906 to 87931—Continued.

87925. No. 5254. *Su su* (Indian millet).

87926. No. 5279. *Kibi,* from Keisho Nando.

87927. No. 5296. *Shiro kibi* (white Indian millet), from Kokido.

87928 to 87931. From Heian Nando.

87928. No. 5336. *Hinki zangui.*

87929. No. 5337. *Daruki zangui.*

87930. No. 5338. *Piku zangui.*

87931. No. 5339. *Zairai shu* (native variety).

87932 to 87977. PHASEOLUS spp. Fabaceae.

From Japan and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

87932 to 87954. Received March 10, 1930, through the Bureau of Industry, Government General, Keijo.

87932 to 87938. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

87932. No. 5287. *Azuki ak amanu* (azuki red bean), from Kokaido.

87933. No. 5495. *Dainagon,* from Kankyo Hokudo. A round-oblong, deep-red bean with rather long, white hilum.

87934 to 87936. From Zenra Nando.

87934. No. 4743. *Tongukum patsu.* A medium-sized, brownish-red seed.

87935. No. 4744. *Muku patsu.*

87936. No. 4745. *Azaku.* A medium-sized, reddish-brown seed.

87937. No. 4990. *Conjunichi azuki* (50-day azuki), from Zenra Hokudo. A medium-sized, light-buff seed.

87938. No. 5281. *Patsu.* A medium-sized, reddish-brown seed from Keisho Nando.

87939. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 5409. *Zairaishu.* A small, glossy, olive-green seed from Heian Nando.

87940 to 87956. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

87940 to 87948. From Heian Nando.

87940. No. 5411. *Kiwa patsu.* A medium-sized, mottled olive and gray seed.

87941. No. 5412. *Muru patsu.* A medium-large, red and white seed.

87942. No. 5413. *Tangu patsu.* A medium-sized, reddish-brown seed.

87943. No. 5414. *Hinmuru patsu.* A medium-sized, light-buff seed.

87944. No. 5415. *San patsu.* A medium-sized, reddish-brown seed.

87945. No. 5416. *Kokuhanshoku.* A medium-sized, mottled black and white seed.

87946. No. 5417. *Oru patsu.* A medium-sized, reddish-brown seed.

87932 to 87977—Continued.

87947. No. 5418. *Hakuzu shu.* A medium-sized, buff seed.

87948. No. 5419. *Akazu shu.* A medium-large, maroon seed.

87949. No. 5420. *Zairaiaka.* A medium-sized, maroon seed. From Heian Hokudo.

87950 to 87952. From Kogendo, Chosen.

87950. No. 5443. *Hakushoku* (white bean). Round to oblong, dull creamy white or buff, with a rather long, white hilum.

87951. No. 5442. *Akashoku* (red bean).

87952. No. 5444. *Kokushoku* (black bean).

87953. No. 5473. *Shonagon.* A medium-large, glossy, light-red seed. From Kankyo Nando.

87954. No. 5474. *Koshu.* A medium-large, glossy, bright reddish-brown seed. From Kankyo Nando.

87955 and 87956. From the Tamai Branch Experiment Station, Tamai Saitama Ken, Japan, March 24, 1930.

87955. No. 5647. *Dainagon azuki.* A medium-sized, maroon seed.

87956. No. 5648. *Chunagon azuki.* A medium-small, maroon seed.

87957 to 87977. Received March 10, 1930, through the Bureau of Industry, Government General, Keijo, Chosen.

87957 to 87967. PHASEOLUS AUREUS Roxb. **Mung bean.**

87957. No. 5288. *Rakutousau,* from Kokaido. Dull-green seeds which are quite uniform in size.

87958. No. 5496. A native variety from Kankyo, Hokudo. Round, shiny, light-green seed with oblong, white hilum.

87959. No. 4738. *Dairokuto* (large mung bean), from Zenra Nando. Seeds are medium-small and dull green.

87960. No. 5273. *Rokuto,* from Keisho Nando. Medium-small, dull, light-green seed.

87961 to 87963. From Heian Nando.

87961. No. 5407. *Usanrokuto.* A mixture of green-seeded varieties.

87962. No. 5408. *Rokushokushu.* A medium-small, dull-green seed.

87963. No. 5410. *Chamurokuto.* A medium-small, dull-green seed.

87964. No. 5421. *Rokuto,* from Heian Hokudo. A small, glossy, green seed.

87965 and 87966. From Kogendo, Chosen.

87965. No. 5445. *Seechoku* (green bean). A dull-green bean with white hilum.

87966. No. 5446. *Hakushoku* (white or yellow bean). A shiny, creamy white bean with rather small, white hilum.

87967. No. 5475. *Hokusei zairai,* from Kankyo Nando.

87932 to 87977—Continued.

87968. PHASEOLUS CALCARATUS Roxb. **Rice bean.**

No. 4742. *Nosekihosonasa,* from Zenra Nando. A medium-sized, red seed.

87969 to 87977. PHASEOLUS VULGARIS L. **Common bean.**

87969. No. 5497. *Kolenashi,* from Kankyo Hokudo. A small, oblong, white bean very much like the American navy bean.

87970 to 87973. From Heian Nando.

87970. No. 5403. *Zamame.*

87971. No. 5404. *Kokushu.* A black field bean

87972. No. 5405. *Uzura* (quail).

87973. No. 5406. *Akashu* (red bean).

87974. No. 5422. *Uzura* (quail), from Heian Hokudo.

87975. No. 5447. *Saito.* A rather small, oblong, brownish-yellow field bean from Kogendo.

87976 and 87977. From Kankyo Nando.

87976. No. 5476. *Kotenashi* Large quantities of this white (navy) bean were sent to the United States during the war. It is said to be one of the best white field beans.

87977. No. 5477. *Uzura* (quail).

87978 to 88024.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received March 10, 1930, through the Bureau of Industry, Government General, Keijo.

87978 to 87986. PISUM SATIVUM L. Fabaceae. **Pea.**

87978 and 87979. From Zenra Nando.

87978. No. 4724. *Furansu.*

87979. No. 4725. *Endo.*

87980. No. 5129. *Endo,* from Zenra Hokudo.

87981. No. 5277. *Endo,* from Keisho Nando.

87982. No. 5289. *Osaya endo* (large-pod pea), from Kakeido.

87983. No. 5386. *Endo,* from Heian Nando.

87984. No. 5423. *Tsurunashi,* from Heian Hokudo.

87985. No. 5448. *Endo,* from Kogendo. A brown pea.

87986. No. 5498. *Aolenashi,* from Kankyo Hokudo. A light pea-green pea.

87987. SECALE CEREALE L. Poaceae. **Rye.**

No. 5507. *Rainugi,* from Kankyo Hokudo.

87988 to 88024. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

87988 to 87990. From Zenra Nando.

87978 to 88024—Continued.

87988. No. 4733. *Morokoshi.*

87989. No. 4734. *Charususu.*

87990. No. 4735. *Mochisangu.*

87991. No. 4797. *Susukuru,* from Chusei Nando.

87992 to 88008. From Zenra Hokudo.

87992. No. 5083. *Bangumanguisusu.*

87993. No. 5084. *Susu zairai shu.*

87994. No. 5085. *Susu zairai shu.*

87995. No. 5086. *Susu zairai shu.*

87996. No. 5087. *Susu zairai shu.*

87997. No. 5088. *Mebususu.*

87998. No. 5089. *Susu zairai shu.*

87999. No. 5090. *Susu zairai shu.*

88000. No. 5091. *Mokutakususu.*

88001. No. 5092. *Gurususu.*

88002. No. 5093. *Susu zairai shu.*

88003. No. 5094. *Susu zairai shu.*

88004. No. 5095. *Susu zairai shu.*

88005. No. 5096. *Susu zairai shu.*

88006. No. 5097. *Susu zairai shu.*

88007. No. 5098. *Bangu manguisusu.*

88008. No. 5099. *Kanchisusu.*

88009. No. 5271. *Morokoshi,* from Keisho Nando.

88010. No. 5294. *Morokoshi noorusuku,* from Kokaido.

88011 to 88016. From Heian Nando.

88011. No. 5348. *Mozakususu.*

88012. No. 5349. *Merususu.*

88013. No. 5350. *Tsungumengususu.*

88014. No. 5351. *Mippotsujoshu* (thick spike, common).

88015. No. 5352. *Meisenhakushu* (Meiseu white).

88016. No. 5353. *Zairai shu* (native variety).

88017. No. 5427. *Kesaku,* from Heian Hokudo.

88018. No. 5481. *Eikozairai,* from Kankyo Nando.

88019 to 88022. From Keisho Hokudo.

88019. No. 5158. *Mochisusu.*

88020. No. 5159. *Eumokususu.*

88021. No. 5160. *Waseshu.*

88022. No. 5161. *Momokususu.*

88023. No. 5453. *Morokoshi,* from Kogendo, Chosen.

88024. No. 5501. *Zairai shu,* from Kankyo Hokudo.

88025 to 88068. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae.

Common wheat.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, Chosen, March 10, 1930.

88025 to 88068—Continued.

88025 to 88027. From Zenra Nando.

88025. No. 4739. *Imumiru.*

88026. No. 4740. *Komugi.*

88027. No. 4741. *Komugi.*

88028 and 88029. From Chusei Nando.

88028. No. 4800. *Eshima.*

88029. No. 4901. *Tonmuru.*

88030 to 88033. From Zenra Hokudo.

88030. No. 5022. *Utongumiru.*

88031. No. 5023. *Komugi zairai shu* (wheat, native variety).

88032. No. 5025. *Komugi zairai shu.*

88033. No. 5032. *Komugi zairai shu.*

88034 to 88058. From Keisho Hokudo.

88034. No. 5218. *Orumiru.*

88035. No. 5219. *Burugunmiru.*

88036. No. 5220. *Soubaku.*

88037. No. 5221. *Komugi.*

88038. No. 5222. *Soubaku.*

88039. No. 5223. *Komugi.*

88040. No. 5224. *Komugi zairai shu.*

88041. No. 5225. *Wase komugi* (early wheat).

88042. No. 5226. *Komugi.*

88043. No. 5227. *Zairai komugi* (native wheat).

88044. No. 5228. *Soubaku.*

88045. No. 5229. *Komugi.*

88046. No. 5230. *Komugi.*

88047. No. 5231. *Komugi.*

88048. No. 5232. *Komugi.*

88049. No. 5233. *Soubaku.*

88050. No. 5234. *Bomumiru.*

88051. No. 5235. *Zairai komugi.*

88052. No. 5236. *Ejima.*

88053. No. 5237. *California.*

88054. No. 5238. *Sarushirumiru.*

88055. No. 5239. *Nutsumiru.*

88056. No. 5240. *Potsumiru.*

88057. No. 5241. *Cheamumiru.*

88058. No. 5242. *Zairai komugi.*

88059. No. 5272. *Miru,* from Keisho Nando.

88060. No. 5291. *Komungi California,* from Kokaido.

88061 to 88066. From Heian Nando.

88061. No. 5390. *Namuzanmiru.*

88062. No. 5391. *Nurumiru.*

88063. No. 5392. *California.*

88064. No. 5393. *Zairai shu.*

88065. No. 5394. *Yuuboushu.*

88066. No. 5395. *Namumer.*

88067. No. 5450. *Komugi,* from Kogendo.

88068. No. 5479. *California,* from Kankyo Nando.

88069 to 88089.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1930.

Received through the Bureau of Industry, Government General, Keijo, March 10, 1930.

88069 and 88070. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

88069. No. 5401. *Tongubei,* from Heian Nando. A medium-sized, black seed.

88070. No. 5402. *Somusokui,* from Heian Nando. A medium-small, white seed with brown hilum.

88071 to 88089. ZEA MAYS L. Poaceae. **Corn.**

88071 to 88077. From Heian Nando.

88071. No. 5343. *Bei kopn shu* (American variety).

88072. No. 5346. *Norangukangunengui.*

88073. No. 5347. *Orukangunengui.*

88074. No. 5340. *Hinkangunengui.*

88075. No. 5341. *Okukangunengui.*

88076. No. 5344. *Charukongunengui.*

88077. No. 5345. *Tongu orukonnengui.*

88078. No. 5295. *Tomonroski sangaunami,* from Kokaido. A small, flinty, yellow grain.

88079. No. 5502. *Long fellow,* from Kankyo Hokudo.

88080 and 88081. From Zenra Hokudo.

88080. No. 5139. *Tomorokoshi.* A white flint corn with small grains.

88081. No. 5141. *Tomokoshi.* A white flint corn.

88082 and 88083. From Keisho Hokudo.

88082. No. 5163. *Mokususu.* White flint corn. The grains are more or less round.

88083. No. 5164. *Toumorokoshi.* A small-grained variety.

88084. No. 5275. *Toumorokoshi,* from Keisho Nando.

88085. No. 5428. *Koshoku zairai* (yellow native), from Heian Hokudo.

88086. No. 5454. *Toumorokoshi,* from Kogendo. A variety with roundish, white, flinty grains.

88087 and 88088. From Kankyo Nando.

88087. No. 5482. *Anpen zairai.*

88088. No. 5483. *Kozan zairai.*

88089. No. 5342. *Koshoku,* from Heian Nando.

88090. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Asparagus-bean.**

From Cuba. Seeds collected by T. A. Fennell at Harvard Botanic Garden, Soledad, Cienfuegos. Received May 9, 1930.

No. 17. *Yard long pod* bean (Chinese summer bean). This is eaten as a green bean when the pods are young. It grows best in Cuba in summer and should do well in Florida, where there is no satisfactory summer bean.

88091. ERYTHRINA BERTEROANA Urban. Fabaceae. **Coraltree.**

From Mayaguez, Porto Rico. Seeds presented by T. B. McClelland, Senior Horticulturist, Porto Rico Agricultural Experiment Station. Received May 14, 1930.

A tropical tree, about 25 feet high, with pinnately trifoliolate leaves and dense racemes of red pea-shaped flowers. It is native to Cuba.

88092 and 88093. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Australia. Seeds presented by the Melbourne Experimental Station. Received May 8, 1930.

88094 to 88103.

From the Union of Socialistic Soviet Republics. Seeds presented by Prof. K. Kvaratzkhelia, Abkhasian Agricultural and Forest Experiment Station, Sukhoun, Caucasus. Received May 9, 1930.

88094 to 88099. AMYGDALUS spp. Amygdalaceae.

88094 and 88095. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). **Almond.**

Collected in Turkmenia in the Kopet Dag Mountains.

88094. Variety *amara.*

88095. Variety *dulcis.*

88096. AMYGDALUS LYCIOIDES Spach.

Collected in the Kopet Dag Mountains.

88097. AMYGDALUS PERSICA L. **Peach.**

Collected in Turkmenia on the mountain Chardjouy, on the river Amua Daria.

88098. AMYGDALUS PETUNNIKOWI Litw.

Collected in the Chingan Mountains, Usbekestan.

88099. AMYGDALUS SCOPARIA Spach.

Collected in Turkmenia on the slopes of the Kopet Dag Mountains.

88100. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Turkmenia. Collected in the grove near the fort, Koushka.

88101. PRUNUS ARMENICA L. Amygdalaceae. **Apricot.**

From Aoul Koeshi near Ashhabad.

88102. PRUNUS CERASIFERA Ehrh. Amygdalaceae. **Myrobalan plum.**

From Turkmenia. Collected in the Kopet Dag Mountains.

88103. PUNICA GRANATUM L. Punicaceae. **Pomegranate.**

From Kopet Dag Guen, Turkmenia.

88104. OROXYLON INDICUM (L.) Vent. Bignoniaceae. **East Indian trumpetflower.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Horticulturist, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received May 9, 1930.

88104—Continued.

A tropical Asiatic ornamental tree, 40 feet or less high, with glossy compound leaves 2 to 4 feet across, and terminal panicles of white or purple flowers. The large flat pods, up to 3 feet in length, contain winged seeds.

For previous introduction see No. 66255.

88105 to 88139.

From Cuba. Seeds collected by T. A. Fennell at Harvard Botanic Garden, Soledad, Cienfuegos. Received May 9, 1930.

88105. ALIBERTIA EDULIS A. Rich. Rubiaceae.

No. 2. A subtropical shrub or small tree up to 20 feet high, with lanceolate to ovate, coriaceous leaves 3 to 8 inches long; white, salverform flowers an inch across, and globose, yellow, berrylike fruits an inch in diameter, said to be edible but not agreeable in flavor. It is native to Central America and the West Indies.

88106. ARECA sp. Phoenicaceae. **Palm.**

No. 70. A striking, straight-stemmed, slender, pinnate-leaved palm.

88107. ARIKURYROBA SCHIZOPHYLLA (Mart.) Bailey (*Cocos schizophylla* Mart.). Phoenicaceae. **Cutleaf palm.**

No. 74. A slender, straight-stemmed, pinnate-leaved palm.

88108. CAESALPINIA SAPPAN L. Caesalpiniaceae. **Sappan.**

No. 56. A shrubby leguminous tree, native to India and the Malay Archipelago, which bears showy yellow flowers. The wood yields a red dye, and the bark is used for tanning. It is said to be an excellent hedge plant and to endure rather poor dry soils.

For previous introduction see No. 66182.

88109. CASSIA DIDYMOBOTRYA Fres. Caesalpiniaceae.

No. 58. An African shrub or small tree, 7 to 10 feet high, with finely divided leaves about a foot long, and numerous yellow flowers in erect racemes up to a foot in length.

For previous introduction see No. 59675.

88110. CITRUS LIMONIA × AURANTIFOLIA. Rutaceae. **Lemon-lime.**

No. 86. Scions of a large-fruited variety, originated by Mr. Grey.

88111. CITRUS SINENSIS × GRANDIS. Rutaceae. **Sweet grapefruit.**

No. 85. Bud wood of a hybrid originated by Mr. Grey by crossing the Washington Navel orange with grapefruit. Both plant and fruit have all the characteristics of grapefruit except that the fruit is as sweet as that of an orange.

88112. CORDIA GLABRA Cham. Boraginaceae.

No. 89. A spreading Cuban tree bearing numerous panicles of bright-orange, cherrylike, edible fruits. The fruit is made into a delicious and beautiful jelly. The tree is very decorative when in fruit.

88113. COUMAROUNA PANAMENSIS Pittier. Fabaceae.

88105 to 88139—Continued.

No. 59. A large tropical tree up to 150 feet high with alternate compound leaves made up of five to eight obliquely elliptic leaflets 6 to 12 inches long, loosely branching terminal panicles of large pink flowers, and flattened, elliptic, chocolate-brown fruits 2 to 3 inches long. It is native to the Canal Zone.

88114. FICUS SUBSCABRIDA Warb. Moraceae. **Fig.**

No. 4. A wide spreading Cuban tree reaching a height of 60 to 70 feet and a spread of 80 feet or more. The leaves are very similar to those of *Ficus elastica* in shape and thickness, but smaller. The fruit is eaten by pigs, bats, and other animals and birds.

88115. GENIPA AMERICANA L. Rubiaceae. **Genipa.**

No. 78. *Marmalade box.* A large stately tree, native to the American Tropics, growing 60 feet in height, with dark-green leaves a foot or more long. The edible fruits are about the size of an orange.

For previous introduction see No. 44183.

88116. GOSSYPIUM sp. Malvaceae. **Cotton.**

No. 57. A native brown perennial cotton.

88117. HETEROSPATHE ELATA Scheff. Phoenicaceae. **Palm.**

No. 18. A tall, unarmed palm, with a straight, slender stem and long pinnate leaves, growing in protected situations where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house palm.

88118. INODES CAUSIARUM O. F. Cook (*Sabal causiarum* Beccari). Phoenicaceae. **Porto Rico hat palm.**

No. 92. A Porto Rican palm 50 feet high, with a white trunk 2 feet thick and palmately divided leaves about 12 feet wide. Most of the palm-leaf hats made in Porto Rico are from the leaves of this tree.

For previous introduction see No. 77166.

88119. LATANIA LODDIGESII Mart. Phoenicaceae. **Palm.**

No. 22. A low spineless palm, native to Mauritius, with rounded, fan-shaped leaves 3 to 5 feet long, and pear-shaped fruits over 2 inches long.

For previous introduction see No. 68119.

88120. LICUALA SPINOSA Thunb. Phoenicaceae. **Palm.**

No. 72. A beautiful fan palm, native to the East Indies, with graceful stems 20 to 25 feet tall, produced in groups.

For previous introduction see No. 66226.

88121. LIVISTONA HOOGENDORPII Andre. Phoenicaceae. **Palm.**

No. 16. A tall Japanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles, 3 to 5 feet long, red brown at the base and becoming olive green near the leaf. The leaves are made

88105 to 88139—Continued.

up of 10 to 12 plicate, pendulous segments with five to seven acute lobes at the apex.

For previous introduction see No. 46006.

88122. LUCUMA SERPENTARIA H. B. K. Sapotaceae.

No. 25. A Cuban relative of the canistel (*Lucuma nervosa*) with yellow, oblate fruit about 3 inches in diameter. The flesh of the fruit is very similar both in taste and texture to that of the canistel. A medium-sized tree reaching a height of from 30 to 40 feet.

88123. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 75. A tropical hybrid tomato, developed by Mr. Grey, which bears good-sized fruit throughout the summer months. It should do well in Florida where there is no satisfactory summer tomato.

88124 to 88127. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

88124. No. 83. *Mammee.* Scions of a yellow-fruited variety, whose fruit is smaller but of a better quality than the Chino (No. 88126).

88125. No. 87. Mango hybrid. Bud wood of a hybrid between S, a native variety, and India, an East Indian type. This hybrid is said by Mr. Grey to be the best and latest mango he has seen.

88126. No. 80. *Chino.* Bud wood of a large-fruited mango, presumably an East Indian type, with fruit as large and nearly as good quality as the Haden. The fruit is green when ripe.

88127. No. 82. A seedling tree, presumably *Chino,* which is supposed to be an East Indian type. The green fruits are as large and nearly as good in quality as the Haden.

88128. NORONHIA EMARGINATA (Lam.) Thouars. Oleaceae.

No. 24. A large shrub or small tree with opposite evergreen, coriaceous, oblong, entire leaves and axillary clusters of fragrant yellowish flowers followed by edible globose, purple fruits about an inch in diameter. It is native to Madagascar.

88129. PASSIFLORA VITIFOLIA H. B. K. Passifloraceae.

No. 69. A strong-growing passiflora with large scarlet flowers, which makes a very attractive ornamental. The vine is not attacked by nematodes or insects.

For previous introduction see No. 60356.

88130. PHYLLANTHUS EMBLICA L. Euphorbiaceae. **Nelli.**

No. 47. A small tree with slender branches bearing numerous linear, 2-ranked leaves about one-half inch long. The globose fruits are used as a purgative when raw or cooked to make an acid sauce. Native to tropical Asia.

For previous introduction see No. 52295.

88131. PICRAMNIA PENTANDRA Swartz Simaroubaceae.

88105 to 88139—Continued.

No. 65. A small tree with compound leaves made up of five to nine oblong-obovate, shining leaflets 2 to 3 inches long, and pendulous racemes of small white flowers followed by ovoid red to dark-blue berrylike fruits. It is native to the West Indies.

88132. POSOQUERIA MULTIFLORA Lem. Rubiaceae.

No. 95. A small tree with broadly cordate leaves and terminal cymes of large, tubular, white, very fragrant flowers. It is native to Brazil.

For previous introduction see No. 73821.

88133. SECURIDACA DIVERSIFOLIA (L.) Blake. Polygalaceae.

No. 60. A trailing or climbing shrub with thick, shining, oblong to ovate leaves 2 to 6 inches long and racemes of rose-colored flowers. It is native to Central America and the West Indies.

88134. SYMPLOCOS SALICIFOLIA Griseb. Symplocaceae.

No. 71. A bushy shrub, not unlike a cestrum, with terminal clusters of white flowers, followed by dark-purple fruit.

88135. TERMINALIA MUELLERI Benth. Combretaceae.

No. 21. A large tree which resembles *T. saffordii,* but has slightly larger leaves and fruit. Its fruits are purple when ripe, instead of red as in *T. saffordii.*

88136. TILMIA CARYOTAEFOLIA (H. B. K.) O. F. Cook (*Martinezia caryotaefolia* H. B. K.). Phoenicaceae. **Palm.**

No. 3. A beautiful, slender, straight-stemmed spiny trunked palm with bright orange-scarlet fruits borne in drooping racemes.

For previous introduction see No. 79559.

88137. TRICHILIA HIRTA L. Meliaceae.

No. 93. A shrub or tree up to 60 feet high, with pinnately compound leaves of obliquely ovate glabrous leaflets, and 11 to 21 panicles, 9 inches long, of greenish-yellow flowers. It is native to the West Indies and Mexico.

88138. TRIOPTERIS JAMAICENSIS L. Malpighiaceae.

No. 73. A low-growing woody vine with small purplish flowers.

88139. WALLENIA LAURIFOLIA (Jacq.) Swartz. Myrsinaceae.

No. 66. A small evergreen tree, 25 to 30 feet high, with bright green, leathery leaves. The small white flowers and bright-red fruits are borne in terminal clusters. Native to Cuba. The seed was presented by J. G. Jack, of the Arnold Arboretum.

88140. TRIFOLIUM RESUPINATUM L. Fabaceae. **Persian clover.**

From Persia. Seeds presented by Jalil K. Hashimzade, American Agricultural School, Rezaieh, Urumia. Received May 10, 1930.

From near Ispahan. A clover which is there cut seven times in a season.

For previous introduction see No. 80293.

88141 to 88146. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Madrid, Spain. Seeds presented by J. H. Ford, through J. Sidney Cates. Received May 13, 1930.

Señor Antonio Estaban de Faura, at the seed station of the Madrid Agricultural Station, says that the two alfalfas, *Aragon* and *Totona,* do not resist the parasite "cuscuta"; the *Mielga rustica* may resist better, but is mainly a wild growth and is not cultivated because it gives a smaller yield.

88141 to 88143. Purchased from Robustiano Diez Obeso.

88141. *Aragon.*

88142. *Mielga rustica.*

88143. *Totona.*

88144 to 88146. Purchased from J. Viey Sallettes.

88144. *Aragon.*

88145. *Mielga rustica.*

88146. *Totona.*

88147 to 88164.

From Victoria, Cameroon, Africa. Seeds presented by T. D. Maitland, Superintendent, Botanic Gardens. Received May 15, 1930.

88147. ACACIA SENEGAL (L.) Willd. Mimosaceae.

A tree widely distributed in tropical Africa and cultivated in India. It has pinnate leaves and long, dense, clublike racemes of tiny flowers bristling with long stamens. This plant yields the true gum arabic of commerce.

For previous introduction see No. 48064.

88148. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

An erect shrublike plant 4 to 6 feet high, which may prove useful in improving the soil and also as a fodder plant.

For previous introduction see No. 80167.

88149. CASSIA SOPHERA L. Caesalpiniaceae.

A cosmopolitan tropical shrub 3 to 5 feet high with pinnately compound leaves made up of five to nine pairs of obliquely lanceolate leaflets and axillary and terminal racemes of yellow flowers.

88150. CRACCA VILLOSA PURPUREA (L.) Kuntze (*Tephrosia purpurea* Pers.). Fabaceae.

A purple-flowered, herbaceous perennial of low, spreading habit which is native to tropical Africa. The plant is useful as a cover crop and also as a green manure.

For previous introduction see No. 67966.

88151. CROTALARIA RETUSA L. Fabaceae.

An annual plant, a foot or more high, distributed throughout the Tropics of both hemispheres. The flowers, yellow streaked with purple, are in terminal racemes. For use as a cover crop.

For previous introduction see No. 64061.

88152. DIOCLEA REFLEXA Hook. f. Fabaceae.

88147 to 88164—Continued.

An ornamental, woody, climbing plant, up to 20 feet in length, with compound leaves composed of three thickish leaflets, and rather dense racemes, 4 to 6 inches long, of red flowers. The broad-oblong, leathery pod, 3 to 4 inches long, is densely covered with yellowish-gray silky hairs.

For previous introduction see No. 45619.

88153. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean.**

A very dark-brown seeded variety of bush bean. It is said to be used as green beans, boiled in the pod, and also used when dried.

For previous introduction see No. 80509.

88154. GOSSYPIUM BARBADENSE L. Malvaceae. **Sea-island cotton.**

88155. INDIGOFERA GALEGOIDES DC. Fabaceae. **Indigo.**

A tall shrub with twiggy branches, compound leaves a foot long made up of 11 to 25 oblong, membranaceous leaflets 2 inches long, and short, dense racemes of pale-red flowers. It is native to southeastern Asia.

88156. LEUCAENA GLAUCA (L.) Benth. Mimosaceae.

A shrub or tree up to 30 feet high with a smooth trunk, bipinnate leaves made up of four to eight pinnae bearing 10 to 20 pairs of narrowly lanceolate leaflets half an inch long, and globular heads of small, white flowers. The young branches are used as forage.

For previous introduction see No. 42539.

88157. MIMOSA PUDICA L. Mimosaceae. **Sensitiveplant.**

The well-known sensitiveplant of the Tropics, which is to be tested as green manure.

88158. MONODORA MYRISTICA (Gaertn.) Dunal. Annonaceae. **Calabash nutmeg.**

A handsome tropical evergreen tree bearing an abundance of large, fragrant, yellow and white flowers. These are followed by large fruits containing many oily seeds which are aromatic and used as a condiment by the natives of West Africa.

For previous introduction see No. 75281.

88159. MORINDA CITRIFOLIA L. Rubiaceae. **India-mulberry.**

An ornamental tropical shrub with large, white, juicy fruits.

For previous introduction see No. 73017.

88160. MUCUNA URENS Medic. Fabaceae.

A wide-climbing, woody vine with trifoliolate leaves of ovate-oblong, papery leaflets 3 to 5 inches long and dense heads of sulphur-yellow flowers 2 inches across. It is native to Brazil and is distributed generally throughout the Tropics.

88161. OCHROCARPOS AFRICANUS Oliver. Clusiaceae.

A tropical tree up to 50 feet high with elliptic-oblong, coriaceous leaves 6 to 10

88147 to 88164—Continued.

inches long, axillary flowers 1 to 2 inches across, and large baccate fruits. It is native to tropical Africa.

88162. PARKIA BIGLOBOSA (Willd.) Benth. (*Parkia africana* R. Br.). Mimosaceae.

A tropical tree up to 50 feet high with bipinnate leaves made up of 14 to 30 pairs of pinnae each bearing 50 to 70 pairs of linear-oblong subauriculate leaflets half an inch long. The small red flowers are in dense globose heads and are followed by falcate pods 8 to 12 inches long which contain an edible pulp. It is native to tropical Africa.

88163. RANDIA MACULATA DC. Rubiaceae.

A much-branched shrub 10 to 15 feet high with obovate leaves 5 inches long, and funnel-shaped flowers 3 to 5 inches across, greenish purple outside and white with purple spots inside. It is native to tropical Africa.

88164. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

88165 to 88182. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

From the Union of Socialistic Soviet Republics. Seed presented by M. F. Fernovsky, Government Botanic Garden, Nikita, Yalta, Crimea. Received May 15, 1930.

88165. No. 336. *American.*

88166. No. 571. *American.*

88167. No. 572. *American.*

88168. No. 635. *American.*

88169. No. 617. *Dezekoj.*

88170. No. 679. *Dubek aja suluk.*

88171. No. 5. *Dubek bektemis.*

88172. No. 680. *Dubek gaspza.*

88173. No. 29. *Dubek ksanti.*

88174. No. 282. *Dubek.*

88175. No. 314. *Dubek.*

88176. No. 432. *Dubek.*

88177. No. 650. *Dubek.*

88178. No. 674. *Dubek.*

88179. No. 675. *Dubek.*

88180. No. 679. *Dubek.*

88181. No. 44. *Dubek nikita.*

88182. No. 193. *Persitchan.*

88183. INODES NEGLECTA (Beccari) O. F. Cook (*Sabal neglecta* Beccari). Phoenicaceae. **Palm.**

From Haiti. Seeds received without information, May 15, 1930.

A tree about 20 feet high with a smooth trunk, large fanlike leaves, and large, more or less drooping flower clusters.

For previous introduction see No. 42522.

88184. UROCHLOA PULLULANS Stapf. Poaceae. **Grass.**

From Southern Rhodesia, Africa. Seeds presented by J. M. Moubray, through the Department of Agriculture, Salisbury, Southern Rhodesia. Received May 16, 1930.

88184—Continued.

A perennial grass with branching stems 3 to 7 feet high, linear-lanceolate leaves 6 to 10 inches long, and an inflorescense made up of 5 to 10 dense flexuose racemes of small spikelets. It is native to tropical Africa and is said to be of value for pasture on dry saline soils.

88185 to 88188.

From Porto Rico. Seeds collected near Rio Piedras Experiment Station by H. N. Vinall, Bureau of Plant Industry. Received May 16, 1930.

88185. CALOPOGONIUM ORTHOCARPUM Urban. Fabaceae.

No. 3. A slender vine, somewhat woody below, 3 feet or more long, with hairy leaflets. The blue flowers are less than an inch long. Native to Cuba and Porto Rico.

For previous introduction see No. 38329.

88186. GALACTIA STRIATA (Jacq.) Urban. Fabaceae.

No. 4. A twining vine, 15 feet or more long, with ovate hairy leaflets about 2 inches long and purplish flowers less than an inch long. Native to the West Indies.

88187. PHASEOLUS ADENANTHUS G. Meyer.

No. 2. A perennial twining vine 20 feet or more long, with ovate leaflets and fragrant variegated flowers, white, yellow, and purple. Native to the West Indies.

For previous introduction see No. 41951.

88188. TERAMNUS UNCINATUS Swartz. Fabaceae.

No. 5. *Frijolillo peludo.* A slender tropical American leguminous vine, used as forage in Brazil and also in the Virgin Islands.

For previous introduction see No. 73395.

88189 to 88193. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From the Union of Socialistic Soviet Republics. Tubers presented by Dr. P. S. Tgonin, Emizrasevsky Breeding Station, Moscow. Received May 24, 1930.

88189. No. 123.

88190. No. 146.

88191. No. 169.

88192. No. 179.

88193. No. 525.

88194. FRAGARIA sp. Rosaceae. **Strawberry.**

From Erfurt, Germany. Plants purchased from Walker & Co. Received May 20, 1930.

Sonnenstrahl. Said to be derived from Sieger and Laxton's *Noble.*

88195 and 88196. MANIHOT ESCULENTA Crantz (*M. utilissima* Pohl.). Euphorbiaceae. **Cassava.**

88195 to 88196—Continued.

From Haiti. Cuttings procured by O. F. Cook, Bureau of Plant Industry, and brought to this country by W. S. Jenkins. Received April 8, 1930.

88195. A black variety.

88196. A white variety.

88197 to 88264.

From Tucuman, Argentina. Seeds presented by S. Venturi. Received May 17, 1930.

88197 to 88200. ACACIA spp. Mimosaceae.

88197. ACACIA ATRAMENTARIA Benth.

A small, stout, spiny tree, native to northwestern Argentina, with bipinnate leaves made up of 5 pairs of pinnae and 20 pairs of very small linear-oblong pinnulae. The flowers are in globose heads.

88198. ACACIA BONARIENSIS Gillies.

An almost glabrous tree with angular branches sparsely equipped with short recurved spines. The long, bipinnate leaves and branches are glabrous; the youngest leaflets and the peduncles are silky hairy, as are also the short, panicled flower spikes.

For previous introduction see No. 48036.

88199. ACACIA MACRACANTHA Humb. and Bonpl.

A low thorny tropical tree with a depressed crown, large compound leaves, and yellow flower heads. Native to northern South America.

For previous introduction see No. 74132.

88200. ACACIA VISCO Lorentz.

An Argentina acacia, sparsely armed with recurved spines. The smooth sessile flowers, with numerous long stamens, form scythe-shaped legumes over an inch in width. The leaves are pinnately compound. The striped walnut-colored wood is hard, durable, and highly valued for its resistance to moisture and is used for all kinds of cabinetwork.

For previous introduction see No. 48068.

88201. ACALPYHA VARIABILIS Klotzsch. Euphorbiaceae.

A low tropical shrub, native to Brazil, with short thick stems, ovate acute leaves, and inconspicuous flowers in small slender spikes.

88202. ACNISTUS LORENTZII Dammer. Solanaceae.

A large shrub or tree with ovate or ovate-lanceolate hairy leaves about 6 inches long, and funnel-shaped flowers half an inch across in small clusters. It is native to Argentina.

88203. ALVARADOA AMORPHOIDES Leibm. Simaroubaceae.

Plumajillo. A small tree about 25 feet high, which produces an abundance of white flowers in January.

For previous introduction see No. 50652.

88204 and 88205. AMPHILOPHIUM spp. Bignoniaceae.

88197 to 88264—Continued.

The Amphilophiums are woody vines with opposite, trifoliolate leaves and terminal panicles of large, purple, bell-shaped flowers. They are native to South America.

88204. AMPHILOPHIUM sp.

88205. AMPHILOPHIUM sp.

88206. ARISTOLOCHIA ESPERANZAE Kuntze. Aristolochiaceae.

A tender climber from Paraguay, closely related to *Aristolochia gilbertii.* Its large brown and yellow flowers differ from those of the latter in the relatively larger upper lip and narrower lower lip of the flower.

88207. EXOLOBUS PATENS Four. Asclepiadaceae.

A shrubby perennial with hairy stems and branches, cordate-oval leaves, 2 or 3 inches long, and rather showy white flowers 1 to 2 inches across. Native to southern Brazil.

88208. ASPIDOSPERMA QUEBRACHO-BLANCO Schlecht. Apocynaceae. **Quebracho-blanco.**

A graceful tree up to 75 feet high with alternate, mostly entire leaves and small, yellowish flowers followed by flat woody pods containing thin, circular, winged seeds nearly 3 inches across. It is native to Argentina.

88209. BAUHINIA FORFICATA Link. Caesalpiniaceae. **Bell bauhinia.**

A thorny shrub with cordate leaves divided from the apex nearly to the middle, and terminal and axillary racemes of bell-shaped, cream-colored flowers. It is native to Brazil.

88210. BLEPHAROCALYX GIGANTEUS Lillo. Myrtaceae.

A subtropical tree, up to 90 feet high, common in the thickets of Tucuman, Argentina, with opposite branches and leaves. The latter are entire, oblong, papery, and smooth. The small white flowers appear in axillary clusters.

88211. BOCCONIA FRUTESCENS L. Papaveraceae.

A large showy shrub 10 feet in height, with very large attractive leaves which are deeply lobed and pale beneath. The greenish-yellow flowers are borne in large pendent panicles, often a foot long.

For previous introduction see No. 64913.

88212. BOEHMERIA CAUDATA Swartz. Urticaceae.

A tall shrub or small tree up to 15 feet high with ovate-lanceolate, closely crenate leaves 6 to 10 inches long, pubescent beneath, and long, nodding, spikelike racemes of greenish flowers. It is native to tropical America.

88213. BOMAREA ROSEA (Ruiz and Pav.) Herb. Amaryllidaceae.

A herbaceous plant with elongated stems bearing thin lax oblong leaves 4 inches long and umbels of funnel-shaped flowers 1 inch long, having the outer segments pale red tipped with green and the inner ones greenish yellow. It is native to Peru, Bolivia, and Argentina.

88197 to 88264—Continued.

88214. CAESALPINIA MELANOCARPA Griseb. Caesalpiniaceae.

Guayacan. A handsome and useful tropical timber tree with hard, dark-red wood which in many respects resembles teak. It is of wide-spreading habit, with attractive, doubly compound leaves and clusters of small, yellow flowers. Native to Argentina.

88215. CASSIA EXCELSA Schrad. Caesalpiniaceae.

A shrub or small tree 20 to 30 feet high, with compound leaves composed of 10 to 20 pairs of oblong-elliptic leaflets about an inch long. The yellow flowers are in large axillary racemes. Native to western and northern Brazil.

88216. CASTELA COCCINEA Griseb. Simaroubaceae.

A rigid shrub 6 feet or more in height, with stout spines half an inch long, leathery oblong leaves less than an inch long, and small, red flowers. Native to northern Argentina.

88217. CEDRELA LILLOI C. DC. Meliaceae.

A tree up to a hundred feet high, with alternate, stiff, pinnate leaves a foot long composed of eight pairs of oblong-ovate leaflets about 4 inches long, and small, whitish flowers in panicles over a foot in length. Native to Tucuman, Argentina.

88218. CELTIS TRIFLORA Ruiz. Ulmaceae.

A Peruvian tree with solitary recurved spines, rigid broadly oblong leaves 3 to 5 inches long, small, greenish flowers, and brown, ovoid fruits nearly half an inch long.

88219. CHAMISSOA ALTISSIMA (Jacq.) H. B. K. Amaranthaceae.

A shrub with reclining stems 4 to 6 feet long, ovate to lanceolate leaves 3 to 8 inches long, and large panicles of greenish flowers. It is native to tropical America.

88220. CHORISIA INSIGNIS H. B. K. Bombacaceae.

The *palo borracho* of Argentina is a large tree with a bottle-shaped trunk sometimes 6 feet in diameter and spiny when young. The large, yellowish-white flowers are followed by dark-brown pods. This is one of the silk-cotton trees and is sometimes used as an avenue tree in Argentina.

88221. CHORISIA SPECIOSA St. Hil. Bombacaceae. Floss-silk-tree.

A handsome tree 20 feet high, abundant in Argentina and in the river Provinces of Paraguay. The boll is nearly 5 inches in diameter and 6 inches long. The yellow fiber, called Samahu or Samuy, and similar to the best Javan kapok, is used to a limited extent for stuffing pillows and can be used commercially for life preservers, jackets, water wings, mattresses, etc. The tree has resisted 3° C. without injury to its flowers, although the bolls require hot sun.

For previous introduction see No. 54551.

88222. CLEOME GIGANTEA L. Capparidaceae. Spiderflower.

A shrubby plant 3 to 5 feet high with palmately compound leaves made up of

88197 to 88264—Continued.

seven oblanceolate leaflets, and greenish flowers having linear petals 2 inches long which adhere by their margins and open only on one side. It is native to tropical America.

88223. CNICOTHAMNUS LORENTZII Griesb. Asteraceae.

A handsome shrub about 20 feet high with thick branches, oval leaves about 5 inches long, and purple flowers in large solitary heads. Native to Tucuman, Argentina.

88224. CONDALIA BUXIFOLIA Reiss. Rhamnaceae.

A much-branched, tropical, evergreen shrub armed with numerous thorns over 2 inches long. The rather few obovate leathery leaves are about an inch long. The small, greenish flowers are succeeded by ellipsoidal drupes less than an inch in length. Native to Brazil.

88225. CUPANIA VERNALIS St. Hil. Sapindaceae.

A large tropical timber tree with alternate pinnate leaves and racemose clusters of small, greenish-white flowers. It is native to southern Brazil.

88226. DINOSERIS SALICIFOLIA Griseb. Asteraceae.

A subtropical shrub with thick tortuous branches, lanceolate leaves about 3 inches long, and pale-yellow flowers in large dense heads. Native to Tucuman, Argentina.

88227. DODONAEA VISCOSA (L.) Jacq. Sapindaceae. Hopbush.

A shrub up to 15 feet high with linear to oblanceolate viscid leaves 2 to 6 inches long and small, lateral corymbs of yellowish flowers. It is cosmopolitan in the Tropics, and in Australia the fruits are used in making yeast. The hard, brown, close-grained wood is used in India for engraving, turning, tool handles, and walking sticks.

88228. DOLICHANDRA CYNANCHOIDES Cham. Bignoniaceae.

A climbing shrub with slender branches, opposite leaves made up of two ovate leaflets and a 3-parted tendril at the end, and small clusters of tubular, red flowers 2 to 3 inches long. It is native to southern Brazil and Argentina.

88229. DURANTA LORENTZII Griseb. Verbenaceae.

A shrub 10 to 15 feet high with small coriaceous elliptic leaves serrate toward the apex, and terminal clusters of pale-lilac, tubular flowers. It is native to Argentina.

88230. ENTEROLOBIUM TIMBOUVA Mart. Mimosaceae. Timbo.

A large tree with bipinnate leaves made up of 2 to 5 pinnae each bearing 10 to 20 pairs of falcate-oblong leaflets, and large heads of greenish flowers followed by coriaceous kidney-shaped pods. It is native to Brazil.

88231. EUPATORIUM HIEMALE Lillo. Asteraceae.

A shrub or small tree up to 12 feet high, closely related to *E. lasiophthalmum.* The reddish-violet flower heads are long stemmed, and the leaves are broadly rounded-ovate.

88197 to 88264—Continued.

88232. EUPATORIUM ODORATUM L. Asteraceae.

A vigorous shrub with long leaning or reclining stems, triangular, serrate leaves, and flattish corymbs of pale-blue to white flowers. Widely distributed in tropical America.

88233. EXOLOBUS sp. Asclepiadaceae.

A half-woody climber, native to Brazil, with hairy heart-shaped leaves and rather showy flowers in axillary racemes, followed by large egg-shaped, 5-ribbed fruits.

88234. FAGARA COCO (Gill.) Kuntze. Rutaceae.

An unarmed shrub, native to northern Argentina, with unequally pinnate leaves composed of lanceolate-triangular leaflets and panicles of small greenish-white flowers.

88235. FAGARA NARANJILLO (Griseb.) Engler. Rutaceae.

Sacha limon. A somewhat spiny tree with pinnate leaves about 5 inches long and whitish flowers in terminal triangular panicles 2 to 5 inches in diameter. Native to northern Argentina and Paraguay.

88236. ILEX ARGENTINA Lillo. Aquifoliaceae. Holly.

A tree up to 35 feet high, common in the foothills of Tucuman, Argentina. It is closely related to maté (*Ilex paraguariensis*), from which it differs in having leaves less leathery in texture and in a smaller inflorescence. The ellipsoidal fruits are very dark red or black.

88237. HELIOCARPUS AMERICANUS L. Tiliaceae.

A shrub or small tree up to 30 feet high with broadly cordate leaves, yellowish-white flowers, and bristly fruits. It is native to Mexico.

88238. JACARANDA ACUTIFOLIA Humb. and Bonpl. Bignoniaceae.

A smooth tree with bipinnate leaves made up of six to eight pairs of sharp-pointed entire leaflets, and terminal and axillary panicles of tubular, violet flowers. It is native to Peru.

88239. JODINA RHOMBIFOLIA Hook. and Arn. Santalaceae.

Quebrachillo. A low, bushy, slender tree with 3-pointed spiny leaves. The wood is white and smooth and the bark thick. It is native to Brazil.

88240. JUGLANS AUSTRALIS Griseb. Juglandaceae. Walnut.

A large tree with compound leaves made up of 13 to 21 large, ovate, sharp-pointed, serrate, viscid-pubescent leaflets, and small, grooved, ovoid nuts about an inch in diameter. It is native to Argentina.

88241. OPHRYOSPORUS CHARUA (Griseb.) Hieron. Asteraceae.

A climbing evergreen shrub with small opposite ovate leaves and lax corymbs of white flowers. Native to northern Argentina.

88242. PASSIFLORA MAXIMILIANA Bory. Passifloraceae.

A tropical perennial climber with membranous bilobed leaves, white flowers an inch across, and ovoid fruits over an inch long. Native to tropical Brazil.

88243. PIPTADENIA EXCELSA (Griseb.) Lillo. Mimosaceae.

A tree, sometimes nearly 100 feet high, with 15 to 20 pairs of leaflets in each leaf, and spikes of flowers 2 to 3 inches long. The pods are linear. The rosy wood, which resembles that of *Piptadenia macrocarpa*, is tough and straight grained and is used for carpenter work.

For previous introduction see No. 43458.

88244. PIPTADENIA MACROCARPA Benth. Mimosaceae.

An important timber tree native to Brazil, with 15 to 20 pairs of pinnae each with 10 to 25 pairs of pinnules, hardly an inch long. The flowers occur in peduncled heads in the axils of the leaves, sometimes at the ends of the branchlets. The pods are 6 inches long and an inch wide, with thickened margins.

For previous introduction see No. 43459.

88245. PITHECOLLOBIUM SCALARE Griseb. Mimosaceae.

A handsome subtropical tree, unarmed or sometimes spiny, native to northern Argentina. The small, pinnate leaves are composed of two to four pairs of stiff oblong-linear leaflets half an inch long.

88246. PROSOPIS KUNTZEI Harms. Mimosaceae.

A shrub or small tree, up to 45 feet high, native to the mountains of Bolivia. The twigs become stout spines 3 to 8 inches long. Most of the year the tree is leafless. The dark-purplish wood is of almost flinty hardness.

88247. PROSOPIS SERICANTHA Gill. Mimosaceae.

A subtropical shrub, leafless during most of the year, with stout greenish spines 2 to 4 inches long and short, dense, cylindrical spikes of reddish flowers. Native to Santiago del Estero, Argentina.

88248. PSEUDIBATIA sp. Asclepiadaceae.

A half-woody, upright, rarely climbing, tropical American member of the milkweek family with oval heart-shaped leaves and small flowers.

88249. PTEROGYNE NITENS Tulasne. Caesalpiniaceae.

A tall, stout, evergreen tree, up to 100 feet high, abundant in parts of Argentina and Brazil. It has paripinnate leaves and usually alternate lanceolate, thin-leathery, somewhat shining leaflets, and small, yellow flowers in short, loosely flowered axillary racemes.

For previous introduction see No. 41308.

88250. RAPANEA LAETEVIRENS Mez. Myrsinaceae.

A shrub or small tree with entire oblong, papery leaves nearly 3 inches long, and small, whitish flowers in dense axillary clusters. Native to Tucuman, Argentina.

88251. RAPANEA sp. Myrsinaceae.

Subtropical trees or shrubs with alternate usually entire leaves and small,

88197 to 88264—Continued.

white or pink flowers in dense axillary clusters.

88252. RUPRECHTIA CORYLIFOLIA Griseb. Polygonaceae.

Manzana del campo. A subtropical tree, native to Cordoba, Argentina, with small, stiff, oval-rounded leaves about an inch long. The reddish-gray wood is hard and compact.

88253. SAMBUCUS PERUVIANA H. B. K. Caprifoliaceae.

A small tree 18 to 24 feet high, from the Peruvian Andes, with unequally pinnate leaves about 5 inches long, and very small, white flowers in much-branched terminal cymes, followed by small, ovoid, black berries.

88254. SCHINOPSIS LORENTZII (Griseb.) Engler. Anacardiaceae. **Quebracho.**

An Argentinian timber tree with leathery, compound leaves and branched clusters of small flowers. The wood is hard and durable and yields an important tannin of commerce.

For previous introduction see No. 68980.

88255. SCHINUS LATIFOLIUS Engl. Anacardiaceae.

A subtropical shrub native to Chile, with rather stiff oblong-ovate leaflets 2 or 3 inches long and small, white flowers in few-flowered clusters.

88256. SCHINUS sp. Anacardiaceae. **Peppertree.**

An undescribed peppertree belonging to the section Duvaua and closely related to *Schinus latifolius* (No. 88255).

88257. SERJANIA GLABRATA H. B. K. Sapindaceae.

A climbing shrub with alternate biternate leaves; the leaflets are elliptic-oblong and coarsely serrate-crenate. The white flowers are in axillary spikelike racemes. Native to temperate regions in Peru.

88258 to 88261. SOLANUM spp. Solanaceae.

88258. SOLANUM TRICHONEURON Hort.

Hediondilla grande. A much-branched little tree, common in northern Argentina. The large shining leaves have a disagreeable odor.

88259. SOLANUM TUCUMANENSE Griseb.

A subtropical shrub about 3 feet high, with stout hairy branches, oval-lanceolate leaves, and small white flowers in few-flowered cymes. Native to Tucuman, Argentina.

88260. SOLANUM VERBASCIFOLIUM L.

A shrub or small tree up to 30 feet high with ovate to lanceolate velvety tomentose leaves 6 to 10 inches long, and small white flowers followed by yellowish fruits half an inch in diameter. Native to Mexico, and generally established in the Tropics.

For previous introduction see No. 47800.

88261. SOLANUM sp.

88262. TABEBUIA AVELLANEDAE Lorentz. Bignoniaceae.

88197 to 88264—Continued.

A large, handsome tree with 5-parted leaves about 4 inches across and very numerous rosy-lilac flowers over an inch wide near the ends of the branches. Native to northern Argentina and Paraguay.

88263. TIPUANA TIPU (Benth.) Lillo (*T. speciosa* Benth.). Fabaceae. **Tipu-tree.**

A handsome unarmed tree, with compound leaves which are unevenly pinnate and showy yellow flowers in loosely branched terminal panicles. The tree is a rapid grower, and its horizontal branches make it an excellent shade tree.

88264. TRITHRINAX CAMPESTRIS Drude and Grieseb. Phoenicacceae. **Palm.**

A fan-leaved palm from northern Argentina, closely related to *Trithrinax brasiliensis.* Unlike the latter, the 20 to 30 linear leaf segments are white tomentose above and shallowly bifid.

88265. DIOSCOREA ALATA L. Dioscoreaceae. **Winged yam.**

From Yucatan. Tubers presented by Dr. Sylvanus G. Morley, Carnegie Institution, Washington, D. C. Received May 19, 1930.

Ek Makal. A white-fleshed yam with purplish or red skin and purplish sprouts. The tubers received are each over 2 pounds in weight and of medium length and thickness. This yam is of good quality.

88266 to 88275. LUPINUS spp. Fabaceae. **Lupine.**

From Western Australia. Seeds received from the Chapman Experiment Farm, through George L. Sutton, Director of Agriculture, Perth, Western Australia. Received May 19, 1930.

A collection of lupines introduced for trial as forage crops. Except *L. mutabilis,* all are native to Europe.

88266 to 88268. LUPINUS ANGUSTIFOLIUS L.

For previous introduction see No. 75813.

88266. No. P–1687. Dark blue.

88267. No. P–1684. White.

88268. Red.

88269 and 88270. LUPINUS HIRSUTUS L. **European blue lupine.**

For previous introduction see No. 75914.

88269. Variety *albus.*

88270. Variety *carneus.*

88271. LUPINUS LUTEUS L. **European yellow lupine.**

No. P–1690. Yellow.

88272 to 88274. LUPINUS MUTABILIS Sweet. **South American lupine.**

88272. No. P–1669.

88273. No. P–1653.

88274. No. P–1673.

88275. LUPINUS PILOSUS Murray.

A lupine with blue flowers.

For previous introduction see No. 39198.

88276. ONCOBA ECHINATA Oliver. Flacourtiaceae.

From Ganta, Liberia, Africa. Seeds presented by Dr. George W. Harley. Received May 22, 1930.

A smooth shrub with thin, leathery, oval leaves, small, inconspicuous flowers, and round, prickly fruits about an inch in diameter. It is native to eastern tropical Africa. The seeds contain 46.6 per cent of fat, and an analysis of this fat has shown it to contain 87.5 per cent chaulmoogric acid, which is used in the treatment of leprosy.

For previous introduction see No. 55465.

88277. SACCHARUM sp. Poaceae. **Sugarcane.**

From Hawaii. Cuttings received from H. P. Agee, Director of the Hawaiian Sugar-Planters' Association. Received May 22, 1930.

Received as *Saccharum robustum,* for which a place of publication has not been found.

88278 to 88313.

From Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 26, 1930.

88278. PUERARIA THUNBERGIANA (Sieb. and Zucc.) Benth. Fabaceae. **Kudzu-bean.**

No. 5682. Received from the Manchu Nosan Shokai (Inc.), Dairen, South Manchuria, April 22, 1930.

Large quantities of kudzu seed are collected in South Manchuria as far north as Mukden. No use is made of kudzu in this region other than collecting the seed for shipping to the United States.

For previous introduction see No. 83812.

88279 to 88313. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 88279 to 88293 were received April 21, 1930, from the South Manchuria Experiment Station, Kunchuling.

88279. No. 5649. *Hakubi* (Mukden white). A medium-sized, oval, light glossy yellow bean with pale hilum. Used as grain.

88280. No. 5650. *Chanchun.* Experiment Station No. 220. A medium-small, oval, slightly flattened, dull-yellow bean with large, dark-brown hilum. Used for forage and green manure.

88281. No. 5651. *Kingen.* A medium-small, oval, light glossy yellow bean with russet-brown hilum. Used as grain.

88282. No. 5652. Experiment Station No. 319. A medium-sized, oblong, slightly flattened, glossy, yellow bean with brown hilum. Used for pasture and forage.

88283. No. 5653. *Kokoshu.* A medium-sized, nearly round, glossy, light-yellow bean with light-brown hilum. Used as grain.

88284. No. 5654. Experiment Station No. 543. A medium-sized, oval, slightly flattened, yellowish-brown bean. Used for pasture and forage.

88278 to 88313—Continued.

88285. No. 5655. Experiment Station No. 483. A medium-sized, oval, much flattened, yellowish-brown bean. Used as forage.

88286. No. 5656. *Kaiyuan No. 191.* A medium-small, oval, glossy, yellow bean with pale hilum. Used for forage and green manure.

88287. No. 5657. *Mosheto.* A medium-sized, oval, much-flattened brown bean which appears very similar to Virginia (F. P. I. 19196D). Used as green manure and forage.

88288. No. 5658. Experiment Station No. 480. A medium-small, much-flattened, yellowish-brown bean. Used for forage and green manure.

88289. No. 5659. Experiment Station No. 235. A medium-sized oval, glossy, yellow bean with pale hilum. Used as grain.

88290. No. 5660. *Changechung No. 591.* A medium-sized oval, greenish-yellow bean with pale hilum. Used for forage and green manure.

88291. No. 5661. Experiment Station No. 262. A medium-sized nearly round, glossy, yellow bean with light-brown hilum. Used as grain.

88292. No. 5662. Experiment Station No. 420. A medium-small, oval, much-flattened, black bean with yellow germ. Very similar to *Wilson-Fue.* Used as forage.

88293. No. 5663. Experiment Station No. 224. A medium-small, oval, light-yellow bean with pale hilum. Used as grain.

Nos. 88294 to 88313 were received April 23, 1930, from the inspection division of the South Manchurian Railway wharf. A collection of mixed yellow-seeded Manchurian varieties.

88294. No. 5683. From Kingchuling.

88295. No. 5684. From Chinchan.

88296. No. 5685. From Kaiyuan.

88297. No. 5686. From Changchun.

88298. No. 5687. From Hsian.

88299. No. 5688. From Miaotailzu.

88300. No. 5689. From Penhsihu.

88301. No. 5690. From Tsaichiatun.

88302. No. 5691. From Fengtien (Mukden).

88303. No. 5692. From Sanchanho.

88304. No. 5693. From Ssupingkai.

88305. No. 5694. From Tiehling, Manchuria. Said to be sent to the main island for the manufacture of soy sauce and miso.

88306. No. 5695. From Fushun.

88307. No. 5696. From Kahiisho.

88308. No. 5697. From Kuochiatien.

88309. No. 5698. From Shuangchengpuk.

88310. No. 5699. From Touren.

88311. No. 5700. From Taianchi.

88312. No. 5701. From Changtu.

88313. No. 5702. From Chirin.

88314. CARPOTROCHE BRASILIENSIS (Raddi) Endl. Flacourtiaceae. **Sapucainha.**

From Vicosa, Brazil. Seeds presented by Prof. P. H. Rolfs, through George S. Jamieson, Bureau of Chemistry and Soils. Received May 26, 1930.

A tropical tree 30 to 50 feet high, with oblong leaves about 4 inches long, and few-flowered racemes of small, white flowers. The fruits are about 4 inches in diameter. A sirup said to cure leprosy and an ointment used for skin afflictions are prepared from the seeds.

For previous introduction see No. 77616.

88315 to 88317. LESPEDEZA spp. Fabaceae. **Bushclover.**

From Manchuria. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received June 3, 1930.

88315. LESPEDEZA sp.

No. 5706. Near Dairen, April 29, 1930. Plants growing 18 to 24 inches high in poor, rocky, dry soil.

88316. LESPEDEZA sp.

No. 5707. Near Dairen, April 29, 1930. Plants 24 to 30 inches high growing on dry, rocky mountain sides. The seed is in buttonlike clusters on the stems of the plants.

88317. LESPEDEZA sp.

No. 5708. From plants along the road on top of the wall surrounding the city of Chin-chou. The plant is an annual, 12 to 18 inches high, and grows in thin poor soil. Perhaps the same as No. 5707 [No. 88316].

88318 and 88319.

From Perth, Western Australia. Seeds presented by Miss Ida Richardson. Received June 3, 1930.

88318. CLEMATIS ARISTATA R. Br. Ranunculaceae.

An evergreen woody vine with trifoliolate leaves of cordate to narrowly lanceolate, entire or serrate leaflets 1 to 3 inches long, and yellowish-white flowers 2 inches across in short panicles. It is native to Australia.

88319. NUYTSIA FLORIBUNDA (Labill.) R. Br. Loranthaceae.

A tree 30 feet high, with spreading branches, thick entire, linear leaves 2 to 3 inches long, and orange-yellow flowers in showy racemes crowded at the ends of the branches. Unlike most of the Loranthaceae, this species is terrestrial and not parasitic. It is native to Western Australia.

For previous introduction see No. 25640.

88320 to 88322. GOSSYPIUM BARBADENSE L. Malvaceae. **Sea-island cotton.**

From Egypt. Seeds presented by S. A. Steere, Goodyear Tire & Rubber Co., Akron, Ohio, through T. H. Kearney, Bureau of Plant Industry. Received June 5, 1930.

88320. *Giza* No. 2.

88321. *Giza* No. 7.

88322. *Sakha* No. 4.

88323. LAPAGERIA ROSEA ALBIFLORA Hook. Liliaceae. **White Chile-bells.**

From Winchester, England. Plants purchased from Hillier & Sons, West Hill Nurseries. Received June 5, 1930.

A form in which the flowers are cream colored with a tinge of rose at the base.

88324. TERMINALIA MUELLERI Benth. Combretaceae.

From Lucknow, United Provinces, India. Seeds purchased from the Superintendent, Government Horticultural Gardens. Received June 5, 1930.

A native Australian species which becomes a large tree under favorable conditions, with leathery leaves up to 8 inches long, loose spikes of small, white flowers, and small, ovoid black fruits.

For previous introduction see No. 59687.

88325 and 88326.

From Singapore, Straits Settlements. Seeds presented by the Director, Botanic Gardens. Received June 5, 1930.

88325. FICUS GLOBOSA Blume. Moraceae. **Fig.**

A climbing fig, epiphytic at least when young, with thinly coriaceous, oblong, entire leaves 3 to 6 inches long, abruptly pointed at the tip, and globose fruits an inch in diameter. It is native to India and the Malay Archipelago.

88326. FICUS KURZII King. Moraceae. **Fig.**

A tree with thinly coriaceous ovate-elliptic entire leaves 4 inches long, and globose, dark-purple fruits half an inch in diameter. It is native to India and Java.

88327 and 88328.

From Peru. Cuttings presented by William J. Dennis. Received October 31, 1929. Numbered in June, 1930.

88327. BANISTERIA CAAPI Spruce. Malpighiaceae.

A woody vine with smooth, ovate-lanceolate, coriaceous leaves 3 to 5 inches long and large panicles of small flowers followed by winged fruits about 2 inches long. It is native to Brazil.

88328. LONCHOCARPUS NICOU (Aubl.) DC. Fabaceae. **Nicou.**

A woody vine climbing to the tops of trees with alternate compound leaves made up of about seven ovate, sharp-pointed leaflets, and axillary spikes of pea-shaped, purple flowers. It is native to Guiana, where the roots are used as fish poison.

88329. APODANTHERA sp. Cucurbitaceae.

From Negritos, Peru. Tubers presented by Oscar L. Haught. Received July 24, 1929. Numbered in June, 1930.

Yucca de Monte. A herbaceous vine which grows to a height of 20 feet, with tubers which are edible after being cooked. The growing season is from February to May.

88330. HYPERICUM sp. Hypericaceae. **St. Johnswort.**

From Baguio, Philippine Islands. Seeds presented by P. J. Wester, Department

88330—Continued.

of Agriculture and Natural Resources, Manila. Received June 4, 1930.

An ornamental shrub with golden-yellow flowers, produced in great profusion.

88331 to 88342. ORYZA SATIVA L. Poaceae. Rice.

From Dacca, Bengal, India. Seeds purchased from S. G. Sharngapani, Economic Botanist to the Government of Bengal, through Robert Frazer, American consul general, Calcutta, India. Received June 6, 1930.

88331 to 88334. Varieties especially suitable to subsaline or semisaline conditions.

88331. *Patnai.*

88332. *Chingrighushi* (5).

88333. *Khiraijali* (8).

88334. *Bansful* (3).

88335. *Badkalamkati* (65). Very early transplanted winter paddy.

88336 to 88342. Normally transplanted varieties of winter paddy.

88336. *Badkalamkati* (26).

88337. *Dudsar* (*Dacca No. 5*).

88338. *Indrasail* (*Dacca No. 1*).

88339. *Bhasamanik* (*Chinsura No. 2*).

88340. *Jhingasail* (*Dacca No. 15*).

88341. *Daudkhani* (*Dacca No. 9*).

88342. *Nagra* 68/6.

88343 to 88347.

From the Italian Riviera. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received June 11, 1930.

88343. CITRUS sp.

No. 3501. La Mortola Gardens, May 27, 1930. A very thick-skinned, tiny, rough orange of deep-orange color and without much flesh, but having a delicious flavor. May be resistant to the fruit fly because of its thick skin.

88344. CLEMATIS ARMANDI × MEYENIANA. Ranunculaceae.

No. 3504. La Mortola Gardens, May 27, 1930. A hybrid clematis which is a remarkable pergola vine covering long arbors with a mass of foliage and immense clusters of white flowers. The vine has stood a temperature of 18° F., likes a moist, limestone soil, and grows in partial shade.

88345. ECHINOCACTUS GRUSONII Hildmann. Golden cactus.

No. 3507. A globular cactus, reaching a diameter of 2 feet in old specimens, completely covered by a mass of almost transparent golden-yellow spines which give the plant the appearance of a ball of gold. The flowers, which are deeply set into the surface of the plant, are red and yellow. It is native to Mexico.

88346. ELAEODENDRON CAPENSE Eckl. and Zeyh. Celastraceae. False-olive.

No. 3505. La Mortola Gardens, May 27, 1930. An erect shrub, native to South Africa, with leathery, ovate leaves 3 inches long, and panicles of small,

88343 to 88347—Continued.

white flowers followed by red drupes an inch long. The plant has stood 18° F. without injury.

For previous introduction see No. 79525.

88347. VITIS PIASEZKII Maxim. Vitaceae. Grape.

No. 3503. La Mortola Gardens, May 27, 1930. A Chinese species said to have handsome blue fruits.

For previous introduction see No. 27415.

88348 to 88363. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

From Manchuria and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received June 17, 1930.

Nos. 88348 to 88359 were received May 11, 1930, from the South Manchurian Railway Soybean Seed Farm at Kaiyuan, Manchuria.

88348. No. 5717. *Hakube.* A medium-sized, oval, light-yellow bean with pale hilum.

88349. No. 5718. *Fukukingen.* A medium-sized, oval, glossy, yellow bean with pale hilum. This is a variety developed by the South Manchurian Railway Experiment Station at Kung-Chuling, Manchuria.

88350. No. 5719. *Kaiyuan* (white flower). A medium-sized, oval, glossy, yellow bean, mixed as to color of hilum.

88351. No. 5720. No. 3, seed selection (1928). A medium-sized, nearly round, glossy, yellow bean with pale hilum.

88352. No. 5721. *Kingen.* A medium-sized, nearly round, glossy, yellow bean, mixed as to color of hilum.

88353. No. 5722. Kung-Chuling Station No. 235. A medium-large, nearly round, light-yellow bean with pale hilum.

88354. No. 5723. No. 24–A. Seed selection (1926). A medium-sized, oval, glossy, light-yellow bean with light-brown hilum.

88355. No. 5724. No. 15–B. Seed selection (1926). A medium-sized, nearly round, glossy, yellow bean with pale hilum.

88356. No. 5725. No. 7. Seed selection (1926). A medium-sized, oval, glossy, light-yellow bean with pale hilum.

88357. No. 5726. Kung-Chuling Station No. 305. A medium-sized, oval, light-yellow bean with brown hilum.

88358. No. 5727. No. 6–A. Seed selection (1926). A medium-sized, glossy, light-yellow bean with light-brown hilum.

88359. No. 5728. No. 8. Seed selection (1926). A medium-sized, nearly round, glossy, yellow bean with brown hilum.

Nos. 88360 to 88363 were received May 14, 1930, from the Island Master of Saishuto Island, Chosen.

88360. No 5729. *Komujonkon.* A medium-small, oval, slightly flattened, black bean with yellow germ.

88361. No. 5730. *Purukunkon* (red-yellow). A medium-small, oval, glossy,

88348 to 88363—Continued.

reddish-yellow bean which is planted about June 1 and harvested the first week in October.

88362. No. 5731. *Pakute* (white). A medium-small, oblong, slightly flattened, glossy, yellow bean with brown hilum which is planted June 15 and harvested the first week in October.

88363. No. 5732. *Purukon* (yellow). A medium-large, oval, yellowish-brown bean with yellow germ, which is planted late in June and harvested late in October.

88364 to 88370.

From Victoria, Cameroon, Africa. Seeds presented by T. D. Maitland, Superintendent, Botanic Gardens. Received June 17, 1930.

88364. ARISTOLOCHIA GOLDIEANA Hook. f. Aristolochiaceae.

A perennial vine up to 20 feet long with triangular-cordate leaves and large flowers, greenish with red-purple ribs outside and brown and yellow mottled inside. The tube is more than a foot long, and the spreading limb is a foot in diameter. It is native to tropical Africa.

88365. CACARA EROSA (L.) Kuntze (*Pachyrhizus angulatus* Rich.). Fabaceae. **Yam bean.**

Jacatupe. A twining, wiry-stemmed plant occasionally grown in the West Indies. The large, tuberous roots contain much starch.

For previous introduction see No. 76489.

88366. DIOSPYROS EBENASTER Retz. Diospyraceae. **Black sapote.**

One of the most popular fruits of Mexico. In favorable situations the tree is 60 feet high. The bright-green, shining leaves are 4 to 8 inches long. The oblate, olive-green, thin-skinned fruit is 2 to 5 inches in diameter. The soft, unctuous, dark chocolate-brown pulp is of sweet flavor, somewhat similar to that of the kaki, but scarcely as pleasant.

For previous introduction see No. 52377.

88367. FUNTUMIA ELASTICA (Preuss) Stapf. Apocynaceae. **Lagos rubbertree.**

A large forest tree widely distributed throughout central Africa and the source of Lagos rubber, which is of excellent quality.

For previous introduction see No. 77393.

88368. GOSSYPIUM sp. Malvaceae. **Cotton.**

88369. PARKIA FILICOIDEA Welw. Mimosaceae.

A tropical tree up to 60 feet high, with bipinnate leaves 1 to 2 feet long, made up of six to nine pairs of pinnae, each bearing 16 to 24 pairs of oblong leaflets about an inch long. The scarlet flowers are borne in club-shaped heads about 3 inches long and appear before the leaves. It is native to tropical Africa.

88370. PHYSOSTIGMA VENENOSUM Balfour. Fabaceae. **Calabar-bean.**

A woody vine with trifoliolate leaves having broadly cordate leaflets 5 inches long, and lax, drooping racemes 4 inches long, of beautifully veined pale-pink flowers. The polished chestnut-brown seeds, borne in a thick pod 5 to 7 inches long, are the ordeal beans of the Calabar coast of Africa where this vine is native.

For previous introduction see No. 21481.

88364 to 88370—Continued.

88371. ARISAEMA POLYPHYLLUM (Blanco) Merr. Araceae.

From the Philippine Islands. Seeds presented by P. J. Wester, Department of Agriculture and Natural Resources, Manila. Received June 19, 1930.

A herbaceous perennial about 2 feet high, with a leaf palmately divided into abcut 12 lanceolate entire leaflets 2 inches long and a spathe and spadix resembling those of the well-known American Indian turnip, *A. triphyllum*. It is native to the Philippine Islands.

88372. MANIHOT GLAZIOVII Muell. Arg. Euphorbiaceae. **Ceara rubber.**

From Jamaica. Seeds presented by M. S. Goodman, Superintendent, Hope Gardens, Kingston. Received June 21, 1930.

A tree, native to Brazil, which grows to a height of about 30 feet with a round head. It has 3-lobed to 7-lobed gray-green leaves, in shape and size resembling those of the castor-bean plant. The tree may be tapped for rubber when the trunk is 4 or 5 inches in diameter. The rubber collector first scrapes the loose dirt and stones away from the roots of the tree and then covers the ground with broad leaves in order to catch the dripping sap. He then strips the bark from the trunk to a height of 4 or 5 feet, making a number of spiral incisions. The thick, viscid milk flows from these incisions, some of it runs down to the ground, but most of it dries on the trunk. After several days, when the sap is completely dry, it is broken off in long, stringlike pieces, which are rolled into a ball and packed in sacks. The product is then ready for market.

For previous introduction see No. 72978.

88373 and 88374. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Santiago, Chile. Seeds presented by Alberto J. Wiedmaier, Director, Estación Experimental de la Sociedad Nacional de Agricultura. Received June 24, 1930.

Varieties that are native to Chile.

88373. Chilena de rulo de Polpaico.

88374. Chilena de Vallenar.

88375 to 88416. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

From Pusa, Bihar, India. Seeds presented by F. J. F. Shaw, Imperial Economic Botanist, Imperial Institute of Agricultural Research. Received June 24, 1930.

88375. No. 3.
88376. No. 4.
88377. No. 5.
88378. No. 8.
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88392. No. 33.

88375 to 88416—Continued.

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88410. No. 57.
88411. No. 58.
88412. No. 59.
88413. No. 60.
88414. No. 61.
88415. No. 62.
88416. No. 64.

88417. CITRUS MIARAY Wester. Rutaceae.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Department of Agriculture and Natural Resources. Received June 26, 1930.

A handsome ornamental tree suggested as a stock for cultivated citrus fruits. It has slender, drooping, willowy branches, dark-green leaves, and fruits resembling the lime in appearance and flavor. Native to the Philippine Islands.

For previous introduction see No. 81995.

88418 to 88420.

From Sorrento, Italy. Scions collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received June 30, 1930.

88418 and 88419. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

88418. No. 3509. The *Sorrentino* orange, a variety commonly grown in Sorrento and Capri. The deep-orange fruit is round, thick-skinned, with few seeds, and has a pronounced orange aroma. It is left hanging on the tree for a year and keeps its juiciness. It is grown under the protection of straw mats from December to April and is propagated by budding.

88419. No. 3510. *Sanguinea* orange. The blood orange of Sorrento is an oval, thin-skinned variety which has a red blush on its skin and is a true blood orange of good quality. It is grown, as are all the citrus fruits in Sorrento, under straw mats and protected from wind by chestnut slats from December to April.

88420. ERIOBOTRYA JAPONICA (Thunb.) Lindl. Malaceae. **Loquat.**

No. 3508. A seedling found in the hotel garden at Capri. A very large-fruited variety, almost spherical in shape and of delicious sweetness.

88421 and 88422. GOSSYPIUM HERBACEUM L. Malvaceae. **Cotton.**

From Bombay, India. Seeds presented by J. H. Richie, Secretary, Indian Central Cotton Committee. Received June 27, 1930.

88421. *Wagad No. 4.*

88422. *Wagad No. 8.*

88423. GOSSYPIUM STOCKSII Masters. Malvaceae. **Cotton.**

From Sind, Karachi, India. Seeds presented by the Deputy Director of Agriculture. Received June 27, 1930.

A shrubby tropical Indian cotton with small yellow flowers which is native to the Sind district; it is of the 13-haploid-chromosome group and therefore will not cross with American types. The seed is difficult to germinate. It is sown in India about June; before sowing, the coat is carefully split with a knife or the seed is rubbed upon a piece of fine sandpaper, which allows access of water and helps germination.

For previous introduction see No. 78516.

88424 to 88431.

From Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received June 28, 1930.

88424. BARYXYLUM sp. Caesalpiniaceae.

Attractive tropical trees with mimosa-like foliage and yellow flowers.

88425. BAUHINIA RETICULATA DC. Caesalpiniaceae.

A small tree, 25 feet high, which grows in dry lateritic soil and can stand long periods of drought. The rather small flowers are in compound racemes not much longer than the leaves and are followed by abundant pods which fall to the ground in March, at the beginning of the dry season. Cattle are very fond of these pods.

For previous introduction see No. 70935.

88426. CASSIA ALATA L. Caesalpiniaceae. **Ringworm cassia.**

A coarse, erect, branched shrub 5 to 10 feet high, with stout green branches and pinnate leaves up to 2 feet long. The yellow flowers, 2 inches wide, are in racemes 4 to 10 inches long. The valves of the straight, spreading pods have a papery wing running from end to end. Every portion of this plant is used medicinally. It is native to tropical America, but is now cultivated all over the Tropics, where it grows in humid soil.

For previous introduction see No. 54322.

88427. DIOSPYROS sp. Diospyraceae. **Persimmon.**

Found growing in very rich soil.

88428. GOSSYPIUM NANKING Meyen. Malvaceae. **Cotton.**

Moi cotton from the Phorieng region.

88429. MUSA sp. Musaceae. **Banana.**

A very good wild banana.

88430. INDIGOFERA sp. Fabaceae.

Useful as a green manure.

88431. STRYCHNOS sp. Loganiaceae.

A handsome tree.

88432. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Persia. Seeds presented by Jalil K. Hashimzade, American Agricultural School, Urumia. Received June 30, 1930.

Seeds of one of the better types of pistache.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 104

Washington, D. C. ▼ Issued April, 1932

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1930 (Nos. 88433–89210)

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INTRODUCTORY STATEMENT

The plant introductions included in this inventory (Nos. 88433–89210), for the period from July 1 to September 30, 1930, are largely made up of forage-crop material sent in from China and Chosen by the agricultural explorers, P. H. Dorsett and W. J. Morse, who in recent months have sent in over 200 varieties of soybeans besides alfalfa (*Medicago sativa*, 89041–89047, 89111–89121) and grasses which may prove useful as forage. During this period H. L. Westover was in Morocco and Tunis and sent in grasses (Nos. 88715–88730, 88900–88934) and alfalfa (No. 88936) and seeds of the argan tree (*Argania spinosa*, No. 88935) which is to be tried out in the Southwest as forage for goats. A shipment of forage crops (Nos. 88516–88523) was received from Canberra, Australia, presented by the Division of Plant Industry, Council for Scientific and Industrial Research.

T. H. Parsons, Curator of the Royal Botanic Gardens, Peradeniya, Ceylon, sent a collection of palms (Nos. 88671–88677, 88864) which will be used in the permanent planting at Coconut Grove; later, seeds of these trees will be ready for distribution. From the Philippine Islands, P. J. Wester has sent two palms (*Adonidia merrillii*, No. 88868, and *Heterospathe elata*, No. 89203); also two ornamentals, *Bauhinia monandra* (No. 88512) and *Anemone vitifolia* (No. 88511).

From S. W. McLeod Braggins, superintendent of La Mortola Gardens, Ventimiglia, Italy, was received a collection of ornamentals, *Aloe* spp. (Nos. 88733 and 88738), *Cotyledon* spp. (Nos. 88739–88740), *Crassula* spp. (Nos. 88741–88743), *Echeveria* spp. (Nos. 88744–88751), stonecrop (*Sedum* spp., Nos. 88753–88757), and houseleek (*Sempervivum* spp., Nos. 88758–88772), all of which will be studied by our plant breeders. A shipment of varieties of cyclamen (*Cyclamen* spp., Nos. 89085–89099), which are not commonly grown in this country, was purchased from the Zwanenburg Nurseries, Haarlem, Netherlands.

David Fairchild, during this period, was traveling in the Mediterranean countries and sent apricots (*Prunus armeniaca*, Nos. 88591–88593) and Seville oranges (*Citrus aurantium*, Nos. 88678, 88679, 88682, 88683), as well as a collection of ornamentals.

Plants of peaches (*Amygdalus persica*, Nos. 88543–88560), apples (*Malus sylvestris*, Nos. 88571–88575), and plums (*Prunus* spp., Nos. 88578–88582) were received from New Zealand.

During the period of this inventory Prof. F. T. Bioletti and Knowles A. Ryerson, agricultural explorers, were in north Africa and from Tunis and Morocco sent seeds and cuttings of apricots (*Prunus armeniaca*, Nos. 88597–88606, 88704–88714, 88872–88897, 88937–88946, 88948–88965), peaches (*Amygdalus persica*, No. 88870) and lemon (*Citrus limonia*, No. 88871), all of which will be used by our department plant breeders.

The specialists working with sugarcane have received from Barbados, British West Indies, shipments of cuttings of *Saccharum officinarum* (Nos. 88619–88670, 89173).

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION.
Washington, D. C., September 17, 1931.

INVENTORY[1]

88433. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Huancayo, Peru. Tubers presented by Paul G. Ledig, Huancayo Magnetic Observatory, Department of Research in Terrestrial Magnetism, Carnegie Institution. Received July 1, 1930.

A yellow-fleshed potato.

88434 to 88510.

From Manchuria. Seeds obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received July 1, 1930.

88434. ASTRAGALUS sp. Fabaceae.

No. 5841. May 31, 1930. From near Hsiungyaocheng.

88435. ASTRAGALUS sp. Fabaceae.

No. 5766. From dry rocky hillsides about halfway between Port Arthur, Kodeisen, and Dairen, May 26, 1930. A deep-pink flowered plant of semiprostrate habit growing on poor dry rocky soil. Very abundant. Pods shatter easily.

Nos. 88436 to 88440 were obtained from a warehouse in the South Manchurian Railway storage yards, Yingkon, May 30, 1930.

88436. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

No. 5780. *Chaou mai.* Grown in the Yingkon section.

88437. GOSSYPIUM NANKING Meyen. Malvaceae. **Cotton.**

No. 5783. Seed of native cotton grown in the Yingkon section.

88438 and 88439. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

88438. No. 5778. From the Yingkon section of Manchuria.

88439. No. 5779. From the Yingkon section of Manchuria.

88434 to 88510—Continued.

88440. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 5781. From the Yingkon section of Manchuria.

88441 to 88510. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

88441. No. 5718. *Ku* (Tansen's yellow). From the South Manchurian Railway Experiment Station, Hsiungyaocheng, May 31, 1930. Large yellow, oval, with light-brown hilum. Seed testa more or less split.

88442. No. 5748. From a storage warehouse on the wharves, Dairen, May 31, 1930. Mixed yellow varieties used for export to Europe for the production of oil and oil cake.

88443. No. 5749. From a bag in a storage warehouse on the wharves, Dairen, May 31, 1930. Mixed yellow varieties, Manchurian grown. Exported to Europe for production of oil and oil meal. This sample has a small percentage of brown seed which may have forage value.

88444. No. 5767. *Chinghuangtou* (golden yellow). Medium sized, nearly round, yellow with brown hilum. Used for oil and oil meal.

88445. No. 5768. From the storage yards of the South Manchurian Railway, Yingkon, May 30, 1930. Mixture of yellow and greenish varieties used for oil and oil cake.

88446. No. 5769. *Hakubi* (white eye). From near Yingkon, May 30, 1930. Medium sized, oval, light-yellow bean with pale hilum. Used for oil and oil meal.

88447 to 88449. From the storage yards of the South Manchurian Railway, Yingkon, May 30, 1930.

88447. No. 5770. Mixture of yellow and greenish-yellow seeded varieties used for oil and oil cake.

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[1] It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identification, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

88434 to 88510—Continued.

88448. No. 5771. Mixture of yellow and greenish-yellow seeded varieties used for oil and oil cake.

88449. No. 5772. Mixture of yellow and brown seeded varieties.

88450. No. 5773. *Chinhuangtou* (golden yellow). From the Taga farm, near Yingkon, May 30, 1930. Mixture of black-seeded varieties. Used in the Yingkon section for green manure on poor land.

88451. No. 5774. From a Chinese junk at a wharf of the South Manchurian Railway storage yards, Yingkon, May 30, 1930. Mixture of black-seeded varieties. Used in the Yingkon section for green manure on poor land.

88452. No. 5775. *Hsiaohuangtou* (small yellow). From the Yamada farm, near Yingkon, May 30, 1930. Medium small, nearly round, yellow with brown hilum. Used for oil and oil cake.

88453. No. 5776. *Heitou.* From the South Manchurian Railway storage yards, Yingkon, May 30, 1930. Mixture of black-seeded varieties very similar to the old Wilson (No. 19183). Used in the Yingkon section on poor land for green manure.

88454. No. 5777. *Chinhuangtou* (golden yellow). From the Aiko farm, near Yingkon, May 30, 1930. Medium small, nearly round, yellow with brown hilum. Used for oil.

Nos. 88455 to 88510 are from the South Manchurian Railway Experiment Station, Hsiungyaocheng, May 31, 1930.

88455. No. 5784. Station No. 424–78. Medium large, oval, very light yellow with pale hilum.

88456. No. 5785. *Enryushokozu* (small round yellow). Medium sized, oval, yellow with russet-brown hilum.

88457. No. 5786. *Koiku No. 63.* Kungchuling Bred No. 63. Medium sized, oval, yellow with russet-brown hilum.

88458. No. 5787. *Kokuzu* (black). Medium sized, oval, slightly flattened, black. Yellow germ.

88459. No. 5788. *Shokozu* (small yellow). Medium sized, oval, yellow with reddish-brown hilum.

88460. No. 5789. *Gishutan.* Medium large, oval, light yellow with pale hilum.

88461. No. 5790. *Ohokubi* (large white eye). Medium large, oval, light yellow with pale hilum.

88462. No. 5791. *Daikozu* (large yellow). Medium sized, oval, yellow with brown hilum.

88463. No. 5792. *Moshiito* (flat cattle feed). Medium large, oblong, much-flattened brown seed. Appears identical with the Virginia variety with exception that Moshiito is a little larger.

88464. No. 5793. *Chuhiao.* Medium sized, oval, yellowish green with brown hilum. More or less mottled with brown. Germ yellow.

88434 to 88510—Continued.

88465. No. 5794. *Yukoro.* Medium large, oval, yellow with light-brown to brown hilum.

88466. No. 5795. *Shiryukozu No. 87* (yellow 4-grain No. 87). Medium sized, nearly round, oval, yellow with light-brown hilum.

88467. No. 5796. *Heichoko.* Medium sized, oval, yellow with pale to light-brown hilum.

88468. No. 5797. *Iganzu* (wild boar eye). Medium large, oblong, flattened, black with germ yellow.

88469. No. 5798. *Oaoza* (large green). Medium large, green, oval, with brown hilum. Germ green.

88470. No. 5799. *Marutsubumoshiito* (round cattle feed). Medium sized, oval, much flattened, yellowish brown. Quite similar to the Virginia variety.

88471. No. 5800. *Shokozu* (small yellow). Medium sized, oval, glossy yellow with black hilum.

88472. No. 5801. *Shokokuzu* (small black). Medium sized, oval, slightly flattened, black with yellow germ.

88473. No. 5802. *Mizushirazu* (unknown water). Medium sized, oval, very light yellow with brown hilum. Seed coat more or less cracked.

88474. No. 5803. *Kurogara.* Medium sized, oval, light yellow with light-brown hilum.

88475. No. 5804. *Daikokuzu* (large black). Medium large, oval, black, slightly flattened with green germ.

88476. No. 5805. *Hachigakuao* (August green). Medium sized, oval, greenish yellow with brown hilum.

88477. No. 5806. *Rigaiseigu* (green). Medium sized, oval, dark green with dark-brown hilum. Germ green.

88478. No. 5807. *Henryushokokuza* (small flat black). Medium small, oblong, much flattened, black with germ yellow.

88479. No. 5808. *Kungchuling Improved No 77.* Medium sized, oval, slightly flattened, glossy yellow with russet-brown hilum.

88480. No. 5809. *Tetsusayaaozu* (iron pod green). Medium sized, yellowish green with dark-brown hilum. Mottled slightly with brown.

88481. No. 5810. *Soseichuryu* (early medium sized). Medium sized, oval, yellow with brown hilum. Mottled with dark brown.

88482. No. 5811. *Kiikeaozu* (yellow hair green). Medium sized, yellowish green with dark-brown hilum. Germ yellow. Slightly mottled with brown.

88483. No. 5812. *Shiryuao* (4-seeded green). Medium sized, oval, yellowish green with pale hilum. Germ yellow, mottled with brown.

88484. No. 5813. *Station No. 43½–66.* Medium large, oval very light yellow with pale hilum.

88485. No. 5814. *Station No. 430–76.* Medium sized, oval, light yellow with pale hilum.

88434 to 88510—Continued.

88486. No. 5815. *Kaigen's kingenzu.* Medium sized, oval, light yellow with brown hilum.

88487. No. 5816. *Yonryuao* (green 4-grain). Medium sized, oval, slightly flattened, green with dark-brown hilum. Germ green.

88488. No. 5817. *Aokowazu* (green skin). Medium sized, oval, light green with brown hilum. Germ yellow.

88489. No. 5819. *Genzan.* Medium large, oval, slightly flattened, glossy yellow with pale-brown hilum. Seed coat slightly cracked.

88490. No. 5820. *Haouben.* Medium sized, oval, yellowish green with russet-brown hilum. Germ yellow. Slightly mottled with brown.

88491. No. 5821. *Ryokuchazu* (green tea). Medium large, oval, slightly flattened, green with black hilum. Green germ.

88492. No. 5822. *Nagaobaao* (large longleaf green). Medium sized, oval, yellowish green with pale hilum. More or less mottled with brown.

88493. No. 5823. *Heitankoushirosayaao* (Heitankou white-podded green). Medium sized, oval, yellowish green with light-brown hilum.

88494. No. 5824. *Showafirst, No. 7* 1926). Medium sized, oval, slightly flattened, light glossy yellow with light-brown hilum.

88495. No. 5825. *Koniku No. 66* (Kingchuling Improved No. 66). Medium sized, oval, glossy yellow with russet-brown hilum.

88496. No. 5826. *Liaoyangkii* (Liaoyang yellow). Medium large, oval, yellow with brown hilum.

88497. No. 5827. *Taisho 24–9* (No. 9, 1926). Medium sized, oval, very light yellow with pale hilum.

88498. No. 5828. *Toshigan* (baby rabbit's eye). Medium sized, oval, slightly flattened, reddish brown.

88499. No. 5829. *Kiizu* (yellow). Medium small, nearly round, glossy yellow with brown hilum.

88500. No. 5830. *Shirosayaaozu* (white-podded green). Medium sized, oval, yellowish green with brown hilum.

88501. No. 5831. *Marutsubushokokuzu* (small round black). Medium sized, oval, dull black with yellow germ.

88502. No. 5832. *Ryoryuao.* Medium small, oval, yellowish green with hilum varying from pale to brown.

88503. No. 5833. *Kokusekizu.* Medium sized, oval, yellowish green with brown hilum.

88504. No. 5834. *Shiryukii* (4-grain yellow). Medium sized, nearly round, yellow with light-brown hilum.

88505. No. 5835. *Station No. 424–23.* Medium sized, oval, very light yellow with pale hilum.

88506. No. 5836. *Benikeao* (red hair green). Medium small, oval, yellowish green with brown (light) hilum. Slightly mottled with brown.

88434 to 88510—Continued.

88507. No. 5837. *Kaigenuhiseiza* (Kaigen crow skin green). Medium small, oval, black with green germ.

88508. No. 5838. *Showa No. 1–4* (1926). Medium sized, oval, slightly flattened, light yellow.

88509. No. 5839. *Daikokuzu* (large black). Medium large, oval, dull black with yellow germ.

88510. No. 5840. *Ushigekii* (cow's hair yellow). Medium sized, oval, greenish yellow with dark-brown hilum. Slightly mottled with brown and black.

88511 and 88512.

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received July 7, 1930.

88511. ANEMONE VITIFOLIA Buch.-Ham. Ranunculaceae. **Grapeleaf anemone.**

From Manila. An ornamental species growing at altitudes ranging from 5,000 to 8,000 feet in Mountain Province. It is an annual, reaching a height of 3 feet, much branched, with large, deeply divided leaves and open corymbs of beautiful white flowers. These are followed by round fruits which, when ripe, burst forth in abundant, seed-bearing cotton.

For previous introduction see No. 65823.

88512. BAUHINIA MONANDRA Kurz. Caesalpiniaceae. **Butterfly bauhinia.**

From Bukidnon. An ornamental tropical African bush or small tree with handsome pink flowers, variegated with yellow and spotted with red.

For previous introduction see No. 68842.

88513 to 88515. CITRUS spp. Rutaceae.

From Italy and Palestine. Scions collected by Dr. H. S. Fawcett, University of California. Received July 7, 1930.

88513. CITRUS sp.

No. 252. *Chinotli.* From near Abenga, Italy.

88514. CITRUS sp.

No. 124. Collected from Miekwah Israel School, near Telavio, Palestine, May 1, 1930.

88515. CITRUS sp.

No. 125. From Palestine. Collected in May, 1930.

88516 to 88523.

From Australia. Seeds presented by A. McTaggart, Division of Plant Industry, Council for Scientific and Industrial Research, Canberra. Received July 7, 1930.

88516. AVENA SATIVA L. Poaceae. **Oats.**

Mulga oats.

88517. CYTISUS PROLIFERUS L. f. Fabaceae. **Tagasaste.**

A stout leguminous shrub, up to 12 feet high, of rather lax habit, with long, slender branches, and green trifoliolate leaves with silky pubescent lower sur-

88516 to 88523—Continued.

faces. The white flowers are in axillary clusters among the branches. It is native to the Canary Islands, where it is considered an excellent drought-resistant forage plant.

For previous introduction see No. 65584.

88518. DANTHONIA SEMIANNULARIS (Labill.) R. Br. Poaceae. **Wallaby grass.**

A perennial, fine-leaved tussocky grass, 1 to 2 feet high, which provides feed for the greater part of the year. It is said to be a good winter grass, will stand a great amount of grazing, and its palatability both for cattle and sheep is well known.

For previous introduction see No. 81942.

88519. LOLIUM LOLIACEUM (Bory and Chaub.) Hand.-Mazz. (*L. subulatum* Vis.). Poaceae. **Wimmera ryegrass.**

An annual bunch grass with much-branched slender prostrate or ascending stems 2 to 8 inches long. Native to dry sandy places along the coast of southeastern Europe.

For previous introduction see No. 81944.

88520. LOTUS ULIGINOSUS Schkuhr. Fabaceae.

A herbaceous perennial pasture plant of considerable importance in New Zealand, where it grows in swampy ground.

For previous introduction see No. 73267.

88521. MEDICAGO ARBOREA L. Fabaceae. **Tree alfalfa.**

This shrubby species is grown quite extensively as a hedge plant in the island of Minorca, and the branches are cut and fed to stock.

For previous introduction see No. 65024.

88522. STIZOLOBIUM ATERRIMUM Piper and Tracy. Fabaceae. **Mauritus bean.**

88523. TRIFOLIUM SUBTERRANEUM L. Fabaceae. **Subterranean clover.**

An Australian clover which appears to have value as a forage plant for the southern United States.

For previous introduction see No. 64592.

88524 to 88535. GOSSYPIUM spp. Malvaceae. **Cotton.**

From the Union of Socialistic Soviet Republics. Seeds presented by the Director of the Turkestan Plant-Breeding Station, Tashkent, through the Plant Quarantine Control Administration. Received July 7, 1930.

88524. GOSSYPIUM sp.

No. 0100. *Navrotsky.*

88525. GOSSYPIUM sp.

No. 169. *Dakhean.*

88526. GOSSYPIUM sp.

No. 182. *Ak-Djura.*

88527. GOSSYPIUM sp.

No. 0.251. *Triumph Navrotsky.*

88524 to 88535—Continued.

88528. GOSSYPIUM sp.

No. 407. *Kuldja.*

88529. GOSSYPIUM sp.

No. 454. *Gorno-Bukharkaja.*

88530. GOSSYPIUM sp.

No. 508. *Batyr.*

88531. GOSSYPIUM sp.

No. 0.937. *Million Dollar.*

88532. GOSSYPIUM sp.

No. 1306. *Shreder.*

88533. GOSSYPIUM sp.

No. 1838.

88534. GOSSYPIUM sp.

No. 2005.

88535. GOSSYPIUM sp.

No. 2017.

88536. FRAGARIA VESCA L. Rosaceae. **Alpine strawberry.**

From Istanbul, Turkey. Seeds collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received July 8, 1930.

No. 3526. *Osmanli* or *ohoman* variety. Collected June 12, 1930. A very light-colored variety extremely delicate and rather sweet which brings the highest prices on the Istanbul market, where it is sold in special baskets made of split wood. The culture is on high, dry clay soil on hillsides. It is not a first-class variety in any respect.

88537 to 88541.

From Greece. Cuttings and seeds collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received July 8, 1930.

88537. OLEA EUROPAEA L. Oleaceae. **Common olive.**

No. 3545. *Kourmadia* variety. Collected June 17, 1930, from terraces near Kataraktis, South Chios Island. This variety is peculiar in that the fruits as soon as ripe are eaten fresh without processing. They are said to be sweetish and palatable. The olive is not only eaten fresh but is preserved in salt and makes a light-brown pickled olive with soft mealy flesh and mild peculiar flavor. A very old variety in the island of Chios. Tree seems to be vigorous and productive.

88538. PRUNUS sp. Amygdalaceae.

No. 3542a. Collected June 17, 1930, from the G. J. Chovencis garden, Chios. A very pretty plumlike fruit which has a delicate pubescence on the skin. It resembles Burbank's plumcot in many respects and may be a hybrid of some sort. In flavor it is sweet, melting, and has no bitter flavor about the stone to suggest a Japanese origin. Decidedly a good fruit. Color a delicate deep pink over a greenish-yellow background. Seed seems to have an apricot character. Said to be earlier ripening than other sorts.

88539. PUNICA GRANATUM L. Punicaceae. **Pomegranate.**

No. 3546. So-called *Seedless* variety, collected June 16, 1930. This is not

88537 to 88541—Continued.

seedless, but the seed coats are so thin that one can eat the fruits with comfort. It is a favorite in the island of Chios, although not a very bright-colored variety.

88540. SARCOPOTERIUM SPINOSUM (L.) Spach. Rosaceae.

No. 3533. Collected near Messa, Mytilene, June 15, 1930. An interesting, intensely spiny shrub that grows commonly on the dry rocky hillsides of the interior of the island of Mytilene. It withstands freezing temperatures and would doubtless grow in Arizona.

For previous introduction see No. 30105.

88541. TULIPA sp. Liliaceae. **Tulip.**

No. 3549. Said to be white and red in color.

88542. SMITHIA JAVANICA Benth. Fabaceae.

From Java. Seeds presented by the director of the botanic garden, Buitenzorg. Received July 8, 1930.

An East Indian leguminous plant, which is a prostrate or diffuse herb, with compound leaves having five to seven pairs of oblong leaflets about one-half inch long and small yellow flowers.

For previous introduction see No. 65320.

88543 to 88585.

From New Zealand. Plants presented by H. R. Wright, Avondale, Auckland. Received July 12, 1930.

88543 to 88560. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

88543. *Aickin's Cling.* Midseason.

88544. *Free Queen.* Late.

88545. *Golden King.* Cling, very late, yellow flesh.

88546. *D. B. Anzac.* Freestone dormant buds, early. (Apparently from the description, the trees begin dormancy early in the fall, or dormant buds start out early in the spring.)

88547. *Kihi kihi.* Midseason, white flesh.

88548. *Lee's Salway.* Late.

88549. *Exquisite.* Midseason; freestone.

88550. *Marriage's seedling.* Freestone, very late.

88551. *Mitchelson.* Cling; midseason.

88552. *Monkton No. 1.*

88553. *Monkton No. 2.*

88554. *Nectarine peach.* Midseason, freestone, white flesh; Paragon peach × Goldmine nectarine.

88555. *Plummer.* Freestone, midseason.

88556. *Waipawa.* Midseason.

88557. *Wright's Bountiful.* Very late, freestone, yellow flesh.

88558. *Wright's Late red.* Cling; very late.

88543 to 88585—Continued.

88559. *Wright's Midseason.* Freestone; yellow flesh.

88560. *Zealandia.* White flesh, freestone; midseason.

88561 to 88566. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. **Nectarine.**

88561. *Dargaville.*

88562. *Dryden.*

88563. *Gold.*

88564. *John Rivers.*

88565. *Pineapple.*

88566. *Zealandia.*

88567. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

Seedless Emperor.

88568. CITRUS NOBILIS DELICIOSA × GRANDIS. Rutaceae.

Tineura mandarin × grapefruit.

88569. CITRUS NOBILIS DELICIOSA × LIMONIA. Rutaceae.

Mandarin × lemon.

88570. FEIJOA SELLOWIANA Berg.

Magnifica; grafted.

88571 to 88575. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

88571. *Granny Smith.* Australian.

88572. *Laxton's Exquisite.* English.

88573. *Laxton's Superb.* English.

88574. *Owen Thomas.* English.

88575. *Sturmer.* New Zealand.

88576. MALUS sp.

Crimson beauty.

88577. MALUS sp.

Striped beauty.

88578 to 88582. PRUNUS spp. Amygdalaceae.

88578. PRUNUS sp.

Black Doris.

88579. PRUNUS sp.

Bridge's early.

88580. PRUNUS sp.

Ford's early.

88581. PRUNUS sp.

Jewell king.

88582. PRUNUS sp.

Vail's early.

88583. RIBES RECLINATUM × NIGRUM. Grossulariaceae.

Worcester berry. Gooseberry × black currant.

88584. RUBUS sp. Rosaceae.

Lloyd George raspberry.

88585. RUBUS sp. Rosaceae.

Pine's Royal raspberry.

88586 to 88595.

From the Mediterranean region. Seeds collected by David Fairchild, agricultural explorer with the Allison V. Armour expedition. Received July 14, 1930.

88586. CALYCOTOME VILLOSA (Poir.) Link. Fabaceae.

No. 3557. Found scattered over dry hillsides of the island of Cos, June 19, 1930. A pretty yellow-flowered extremely spiny little bush, the shape of a pincushion and very attractive when in flower. It should make a very useful plant for rock gardens where drought resistance is desired. Blooms in May and June. Native to the Mediterranean countries.

88587. COTYLEDON UMBILICUS L. Crassulaceae. **Navelwort.**

No. 3553. Collected on the island of Patmos, June 17, 1930. A perennial, fleshy plant, native to western Europe, which grows about a foot high and has succulent, orbicular leaves and pendulous racemes of yellowish-green flowers.

For previous introduction see No. 79153.

88588. GENISTA sp. Fabaceae.

No. 3552. Collected on a roadside of Cos Island, June 19, 1930. A large yellow-flowered species with leafless shoots tipped with the flowers. Said to be very showy and fragrant.

88589. LUPINUS GRAECUS Boiss. Fabaceae. **Lupine.**

No. 3561. Collected by the roadside on the route to Ayassos, Mytilene Island, June 15, 1930. An annual leguminous plant with a rather dense raceme of intensely blue flowers. Native to southeastern Europe.

88590. ONOPORDUM ILLYRICUM L. Asteraceae. **Cottonthistle.**

No. 3567. Collected June 15, 1930, from a roadside on the route to Ayassos, Mytilene Island. A large biennial thistle-like composite with flat, purple flower heads 3 inches across. Native to southeastern Europe.

88591 to 88593. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

88591. No. 3555. Scions collected June 21, 1930, on the island of Rhodes. An early ripening variety which in the island is past, or almost so, at this time. A firm-fleshed, yellow apricot of medium size, with slight blush, which is said to thrive better in the calcareous soils and stand the constant drying winds better than the French and other European apricots that have been tried in the island of Rhodes. The quality is good to excellent; a bit dry but should be a fine shipper, though perhaps a trifle small. An indigenous variety, not known by name.

88592. No. 3555–A. Native, early, firm-fleshed apricot of the island of Rhodes. Good quality, not very juicy or large, but resists drought and drying winds. Cuttings from same tree under No. 3555 (No. 88591).

88593. No. 3566. Seeds purchased June 21, 1930, in the market of Rhodes. Seeds from good but medium-sized apricots of fine flavor. See No. 3555 (No. 88591) for bud sticks of similar variety.

88586 to 88595—Continued.

88594. PSORALEA BITUMINOSA L. Fabaceae. **Scurf-pea.**

No. 3551. Variety *palestina*. Collected June 17, 1930, near the city, Cos Island, Greece. A very large vigorous plant, with stout stems and unusually large heads of blue flowers, that looks to be a distinct variety or form of this species.

88595. SARCOPOTERIUM SPINOSUM (L.) Spach. Rosaceae.

No. 3560. Collected June 19, 1930, on the island of Cos.

For previous introduction see No. 88540.

88596. PALAQUIUM PHILIPPENSE (Perr.) C. B. Robinson. Sapotaceae. **Alakao.**

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received July 14, 1930.

A large tree with oblong, pointed, stiff leaves, dark green above and russet velvety beneath. The fruit, about 2 inches long, is similar to a small sapodilla and is reported to be sweet, aromatic, and of agreeable flavor. It is native to the Philippines.

88597 to 88606. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Tunisia. Seeds collected by Prof. F. T. Bioletti, University of California, and Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received July 15, 1930.

88597. No. P–XLVI. *Bedri*. From Sfax.

88598. No. P–LII. *Djerbi*. From Gafsa, May 21, 1930.

88599. No. P–LVII. *Gros Indigene*. From Sfax, May 17, 1930.

88600. No. P–XLV. *Mechmech*. From Gabes, May 15, 1930.

88601. No. P–LI. *Mechmech*. From Tozeur, May 20, 1930.

88602. No. P–XLVIII. *Mechmech*. From Deggache, May 19, 1930.

88603. No. P–XLIV. *Mechmech*. From Mahdia, May 19, 1930.

88604. No. P–L. *Mechmech*. From Nefta, May 19, 1930.

88605. No. P–XLIX. *Mechmech*. From Nefta, May 19, 1930.

88606. No. P–LIV. *Souri*. From Dra Tamar, May, 1930.

88607 and 88608. QUERCUS spp. Fagaceae. **Oak.**

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 9, 1929. Numbered in August, 1930.

88607. QUERCUS sp.

No. 1573. November 1, 1929. These mixed acorns were collected under trees

88607 and 88608—Continued.

in the river bottom in the vicinity of the Keijo Prefectorate Seed and Nursery Farm, outside the east gate of Keijo.

88608. QUERCUS sp.

No. 1741. Collected November 11, 1929, from Kokan, on the island of Kokato. Acorns picked up from under narrow-leaved trees between Koka and Kokan. Trees growing on extremely poor red-yellow clay.

88609 and 88610.

From Greece. Seeds collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received July 15, 1930.

88609. EUPHORBIA DENDROIDES L. Euphorbiaceae. Spurge.

No. 3513. Collected June 6, 1930, at an altitude of 1,500 feet, back of Tatoe, near Athens. A smooth, dichotomously branching shrub with small linear-lanceolate leaves and small umbels of inconspicuous flowers. The latex is said to be used as a fish poison. It is native to Greece and the Mediterranean islands.

88610. MEDICAGO ARBOREA L. Fabaceae. Tree alfalfa.

No. 3515. Collected June 6, 1930. A large-leaved variety of this leguminous shrub which occurs in the hottest regions of Greece. It was planted as a hedge and ornamental by Professor Anagnostopulos in the Horticultural School garden of Athens. Since the temperature descends to 23° F. here and does not kill this species, I think it should be tried in Superior, Ariz. Of use for soil-binding purposes.

88611. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

From Wad Medani, Anglo-Egyptian Sudan, Africa. Seeds purchased from the director, Blue Nile Province. Received July 15, 1930.

An African form of the famous Palmyra palm of India. Though a slow grower, it is a very handsome palm when old. In as much as it grows in the dry coastal regions of Ceylon, is apparently able to withstand any amount of lime, and is said to have been used successfully as a binder for sand dunes, it may prove of real value in the calcareous soils of southern Florida. In the number of uses to which it is put in Ceylon, it rivals the coconut. A delicate sugar is made from the sap, which flows in abundance from its inflorescence when cut. The seeds are germinated and the young subterranean hypocotyl used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance and when ripe exhales a delicate fragrance. The hull is eaten by the Tamils of Ceylon.

For previous introduction see No. 81073.

88612 and 88613.

From India. Seeds presented by J. N. Ritchie, Secretary, Indian Central Cotton Committee, Bombay. Received July 16, 1930.

88612 and 88613—Continued.

88612. GOSSYPIUM CERNUUM Todaro. Malvaceae. **Cotton.**

Comilla. An erect bush, 3 feet high, cultivated in India. The flowers are pale sulphur yellow and the petals marked with a purple spot.

For previous introduction see No. 80208.

88613. GOSSYPIUM NEGLECTUM Todaro.

Wani. (*Gossypium neglectum verum* var. *kokatia.*)

For previous introduction see No. 74453.

88614. CEROPEGIA MONTEIROAE Hook. f. Asclepiadaceae.

From the Union of South Africa. Seeds presented by G. Thorncroft, Barberton, Transvaal. Received July 17, 1930.

A glabrous climbing vine with brownish mottled, white stems, opposite, oblong-ovate, succulent leaves 2 to 3 inches long with undulate margins, and axillary clusters of two to three flowers 2 to 3 inches long. The greenish corolla is tubular above an inflated base and is expanded at the top into five triangular flat plates which are white spotted with purple. It is native to tropical east Africa.

88615 and 88616. SOLANUM spp. Solanaceae.

From Peru. Tubers presented by Dr. E. V. Abbott, Plant Pathologist, Estacion Experimental Agricola, Lima. Received July 18, 1930.

88615. SOLANUM sp.

Collected near Jauja, at approximately 13,500 feet above sea level.

88616. SOLANUM sp.

Collected near Lima, at approximately 1,500 feet above sea level.

88617. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Cuba. Seeds presented by Mrs. F. S. Earle, Herrandura. Received July 19, 1930.

Philippino.

88618. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From the Canal Zone. Plants presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received July 19, 1930.

Fairchild.

88619 to 88670. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Sydney, Australia. Cuttings presented by the Colonial Sugar Refining Co., at the request of E. W. Brandes, Bureau of Plant Industry. Received July 24, 1930.

These cuttings belong to the 21 N. G. series, a designation which indicates that they were collected in New Guinea in 1921 and planted near Sydney.

88619. No. 1.
88620. No. 2.
88621. No. 4.
88622. No. 5.

88619 to 88670—Continued.

88623. No. 6.
88624. No. 7.
88625. No. 13.
88626. No. 22.
88627. No. 24.
88628. No. 27.
88629. No. 30.
88630. No. 31.
88631. No. 37.
88632. No. 49.
88633. No. 50.
88634. No. 52.
88635. No. 54.
88636. No. 55.
88637. No. 62.
88638. No. 63.
88639. No. 78.
88640. No. 82.
88641. No. 83.
88642. No. 84.
88643. No. 93.
88644. No. 99.
88645. No. 101.
88646. No. 104.
88647. No. 105.
88648. No. 203.
88649. No. 204.
88650. No. 209.
88651. No. 210.
88652. No. 213.
88653. No. 214.
88654. No. 216.
88655. No. 217.
88656. No. 218.
88657. No. 222.
88658. No. 256.
88659. No. 257.
88660. No. 264.
88661. No. 268.
88662. No. 270.
88663. No. 272.
88664. No. 273.
88665. No. 274.
88666. No. 279.
88667. No. 280.
88668. No. 282.
88669. No. 287.
88670. No. 289.

88671 to 88677.

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens, Department of Agriculture. Received July 28, 1930.

88671. ARECA TRIANDRA Roxb. Phoenicaceae. **Palm.**

A graceful spineless palm, ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of olives, are orange scarlet. Native to India.

For previous introduction see No. 70777.

88672. LICUALA GRACILIS Blume. Phoenicaceae. **Palm.**

A small fan palm from Java which is only 5 to 7 feet high, clusters of which would grace any private garden in the Tropics.

For previous introduction see No. 66225.

88673. LICUALA SPINOSA Thunb. Phoenicaceae. **Palm.**

A dwarf fan-leaved palm, native to the West Indies, 10 to 12 feet high, with roundish leaves 3 feet or more in diameter and 3-angled petioles armed with brownish hooked spines. It requires abundant heat and moisture.

For previous introduction see No. 81590.

88674. ONCOSPERMA FASCICULATUM Thwaites. Phoenicaceae. **Palm.**

The Katu-kitul palm of Indo-Malaya is one of the graceful cluster palms which make magnificent groups, 40 to 60 feet high, in the Peradeniya Gardens. The stems are spiny and therefore not suitable for small gardens, but rather for parks.

For previous introduction see No. 66230.

88675. ONCOSPERMA FILAMENTOSUM Blume. Phoenicaceae. **Palm.**

A cluster palm of great beauty which rises to a height of 50 feet and waves its pinnate leaves in the slightest breeze. Like its relative, *Oncosperma fasciculatum*, it is a spiny palm and therefore not suited to small garden uses but to parks. The great clumps of this palm are wonderfully effective.

For previous introduction see No. 72601.

88676. PHOENIX PUSILLA Gaertn. Phoenicaceae. **Palm.**

A dwarf palm about 4 feet high, with pinnate leaves having spiny petioles, sword-shaped dark-green leaflets, and black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see No. 66234.

88677. PTYCHOSPERMA ANGUSTIFOLIA Blume. Phoenicaceae. **Palm.**

A tropical Australian pinnate palm which grows in great clumps. When young it is suited to pot culture, but should be tried out in the open in southern Florida in private gardens. The small, slender stems make it especially adapted to small gardens.

For previous introduction see No. 66237.

88678 and 88679. CITRUS AURANTIUM L. Rutaceae. **Seville orange.**

From Naples, Italy. Scions collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received July 28, 1930.

88678. Variety *corniculata*. No. 3614. Collected July 14, 1930, from trees growing in the Botanical Garden. A variety that produces fruit with a curious horn on one side.

88679. Variety *foetifera*. No. 3615. Collected July 14, 1930, in the Botanical Garden. A strange abnormal sport that has fruits each containing parts of another fruit embedded in its pulp. These parts sometimes have bits of perfect orange peel developed inside of the flesh of the surrounding orange.

88680. GLADIOLUS HIRSUTUS Jacq. Iridaceae.

From Cape Town, Union of South Africa. Seeds presented by Dr. Rudolph Marloth. Received July 28, 1930.

A species about a foot high with bright-red, fragrant flowers, borne in a very lax, few-flowered spike and sword-shaped, strongly ribbed leaves; found growing in sandy stretches which are moist only during the winter.

For previous introduction see No. 62857.

88681. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

88681—Continued.

From Lima, Peru. Seeds presented by J. Gaudron, Estacion Central Agronomica. Received July 28, 1930.

A wild tomato from near Lima, Peru.

88682 and 88683. CITRUS AURANTIUM L. Rutaceae. **Seville orange.**

From Naples, Italy. Seeds collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received July 28, 1930.

88682. No. 3616. Variety *myrtifolia*. From the Botanic Garden, July 14, 1930. A dwarf tree bearing small fruits not over 2 inches in diameter and with myrtlelike leaves. May be an attractive addition to the gardens of southern Florida.

88683. No. 3617. Variety *salicifolia*. From the Botanic Garden, July 14, 1930. A small-sized tree with willowy branches and narrow willowlike leaves. Fruits small and rather dry with a bitter flavor.

88684. RHUS OXYACANTHA Schousb. Anacardiaceae.

From Algeria. Seeds presented by the Gouvernement General de l' Algerie, Service Botanique, through David Fairchild. Received July 28, 1930.

A shrub with gnarled, spiny branches, ternately compound glabrous leaves having slightly dentate, obovate leaflets, and terminal racemes of inconspicuous flowers followed by smooth, shiny, globose fruits half an inch long. It is native to northern Africa and western Asia near the Mediterranean.

For previous introduction see No. 74187.

88685 and 88686.

From Sicily, Italy. Seeds presented by Giardino Allegra, Catania. Received July 31, 1930.

88685. ARAUJIA SERICIFERA Brot. Asclepiadaceae.

A twining vine with nearly glabrous oblong-acuminate leaves 3 inches long and cymes of faintly odorous salver-shaped white flowers which are pale rose in bud. It is native to southern Brazil.

For previous introduction see No. 33920.

88686. GENISTA AETNENSIS (Bivona) DC. Fabaceae. **Aetna broom.**

An attractive shrub, 6 feet or less in height, with nearly leafless, slender branches and fragrant, yellow flowers in loose terminal racemes. Native to Sicily and Sardinia.

For previous introduction see No. 63359.

88687 to 88702.

From the Mediterranean region. Seeds and bulbs collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received August 2, 1930.

88687 to 88690. ALLIUM spp. Liliaceae. **Onion.**

88687 and 88688. ALLIUM sp.

No. 3600. Collected June 21, 1930, on Monte del Propheta at Station Slia, island of Rhodes. Found growing on the rocks under the pines and cypress trees.

88687. Bulbs.

88688. Seeds.

88689. ALLIUM sp.

No. 3591. Collected June 25, 1930, near Spikho, Cyprus. The seed-bearing stems, 2 feet high, were found growing in dry baked soil of a stubble field.

88690. ALLIUM sp.

No. 3588. Collected June 25, 1930, Nicosia, Cyprus. Tiny-flowered species found on the dry plains of central Cyprus.

88691. ASTRAGALUS sp. Fabaceae. **Milkvetch.**

No. 3584. Presented June 25, 1930, by the Department of Agriculture of Cyprus. A species of milkvetch growing wild at Nicosia, Cyprus.

88692. CISTUS sp. Cistaceae. **Rockrose.**

No. 3603. Collected June 29, 1930, Messara, Crete. A small-leaved species with very woolly leaves and apparently with many flowers on long peduncles. Gathered on the road along the mountains overlooking the valley.

88693. EBENUS sp. Fabaceae.

No. 3602. Collected June 30, 1930, in Crete, en route to Phestos. Leguminous shrub, with heads like clover, that forms patches of considerable size on the dry mountain slopes of Crete, at an altitude of 1,000 feet.

88694. ORNITHOGALUM sp. Liliaceae.

No. 3589. Collected in June, 1930, near Spikho, Cyprus.

88695. ORNITHOGALUM sp. Liliaceae.

No. 3597. Collected in June, 1930, at Spikho, Cyprus.

88696. VICIA BITHYNICA L. Fabaceae.

No. 3583. Presented June 25, 1930, by the inspector of Nicosia, Cyprus.

88697. PROSOPIS STEPHANIANA (Bieb.) Kunth. Mimosaceae.

No. 3572. Collected June 25, 1930, Agriculture Department of Cyprus. A deep-rooted shrubby legume which grows abundantly on dry lands in the interior plain of Cyprus. Sheep and cattle browse on it, and the bees make good honey from its abundant flowers.

For previous introduction see No. 49481.

88698. PRUNUS sp. Amygdalaceae.

No. 3601. Obtained in the market, Mytilene Island, Greece, June 15, 1930. A small sweet plum of greenish-red color and good flavor. The species occurs wild on the island.

88699. TRIGONELLA sp. Fabaceae.

No. 3564. Collected June 19, 1930, on the island of Cos. A low-growing, yellow-flowered species which, on drying, has the odor of fenugreek very strongly developed; found in stubble field, on a terrace.

88687 to 88702—Continued.

88700. TULIPA sp. Liliaceae. **Tulip.**

No. 3586. Obtained June 25, 1930, Nicosia, Cyprus.

88701. VICIA SATIVA L. Fabaceae. **Vetch.**

No. 3582. Obtained June, 1930, from Nicosia, Cyprus.

88702. VICIA TENUIFOLIA Roth. Fabaceae. **Vetch.**

No. 3581. Obtained June 25, 1930, through the Inspector of Agriculture, Nicosia, Cyprus. A deep-rooted perennial cut for hay in the hills of Cyprus, where the rainfall is light.

For previous introduction see No. 30558.

88703. CARISSA CARANDAS L. Apocynaceae. **Karanda.**

From Manila, Philippine Islands. Seeds presented by P. J. Webster, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received August 4, 1930.

Variety *dulcis*. A form said to bear egg-shaped or roundish subacid fruits having a juicy pulp of pleasant flavor which may be eaten out of hand. It came originally from India.

88704 to 88714. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Algiers, Algeria. Seeds collected by Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received August 4, 1930.

88704 to 88707. From David Lalou, Laghouat, Algiers.

88704. No. L.

88705. No. LI.

88706. No. LII.

88707. No. LIII.

88708 to 88710. From Albert Thomas, Ain-el-Ibel.

88708. No. XLI.

88709. No. XLII.

88710. No. XLIII.

88711 to 88714. From David Lalou, Laghouat, Algiers.

88711. No. XLIX.

88712. No. XLVI.

88713. No. XLVII.

88714. No. XLVIII.

88715 to 88730.

From Africa. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received August 4, 1930.

88715. AGROPYRON JUNCEUM (L.) Beauv. Poaceae. **Grass.**

No. 3. Collected June 22, 1930, from a sand dune near Algiers.

88716. AGROSTIS sp. Poaceae. **Grass.**

No. 9. Collected June 30, 1930, in the mountains north of Souk-el-Arba, Tunisia.

88715 to 88730—Continued.

88717. AGROSTIS VERTICILLATA Vill. Poaceae. **Grass.**

No. 18. Collected July 4, 1930, in a garden at Ain-el-Ibel, Algeria.

88718 and 88719. AMPELODESMOS MAURITANICA (Pair.) Dur. and Schintz. Poaceae. **Grass.**

Collected June 30, 1930, in the mountains north of Souk-el-Arba.

For previous introduction see No. 60319.

88718. No. 4. Not eaten by goats or sheep.

88719. No. 6.

88720. CYNODON DACTYLON (L.) Pers. Poaceae. **Bermuda grass.**

No. 8. Collected June 30, 1930. An unusual type found growing under very dry conditions several miles northwest of Tunis.

88721. CYNOSURUS ECHINATUS L. Poaceae. **Grass.**

No. 7. Collected June 30, 1930, in the mountains north of Souk-el-Arba, Tunisia.

88722 and 88723. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

88722. No. 16. Collected July 4, 1930, from Ain-el-Ibel, Algeria. Said to have come originally from France.

88723. No. 16–a. Collected July 4, 1930, from Laghouat, Algeria. Said to be from seed obtained in France about 15 years ago.

88724. ORYZOPSIS MILIACEA (L.) Benth. and Hook. Poaceae. **Grass.**

No. 17. Collected July 4, 1930, from a garden at Ain-el-Ibel.

88725 to 88728. PHALARIS spp. Poaceae. **Grass.**

88725. PHALARIS CANARIENSIS L. **Canary grass.**

No. 12. Collected in July, 1930, in the mountains between Phillipville and Constantine.

88726. PHALARIS COERULESCENS Desf.

No. 13. Collected July 1, 1930, between Phillipville and Constantine.

For previous introduction see No. 76884.

88727 and 88728. PHALARIS TRUNCATA Guss.

88727. No. 5. Collected June 30, 1930, in the hills northwest of Tunis.

88728. No. 11. Collected July 1, 1930, from the mountains between Phillipville and Constantine.

88729. TRIFOLIUM FRAGIFERUM L. Fabaceae. **Strawberry clover.**

No. 14. Collected July 2, 1930, from a high plateau near Djelfa, Africa.

88730. ZEA MAYS L. Poaceae. **Corn.**

No. 15. Collected July 2, 1930, in the market at Bou Saada. A type common in the oases of northern Africa.

88731. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Yugoslavia. Tubers collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received August 5, 1930.

No. 3618. North of Split, July 7, 1930.

88732 to 88735.

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, Superintendent of the La Mortola Gardens, through David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received August 5, 1930.

88732. ACACIA ACINACEA Lindl. Mimosaceae.

No. 3623. Collected July 17, 1930. A handsome small tree with ornamental foliage and pretty flowers. Native to Australia.

For previous introduction see No. 75535.

88733. ALOE STRIATA Haw. Liliaceae.

No. 3622. Variety *hanburiana*. Collected July 17, 1930. A fleshy plant with a short stem, 1 to 2 feet in old plants, and a rosette of 12 to 30 oblong-lanceolate glaucous leaves 1 to 2 feet long, with a cartilaginous reddish margin. The bright-red flowers are in capitate racemes on a stout, much-branched inflorescence. Native to the coast of South Africa.

For previous introduction see No. 81139.

88734. COWANIA MEXICANA D. Don. Rosaceae.

No. 3624. Collected July 17, 1930. A shrub 3 to 6 feet high with small crowded cuneate 3-cleft to 7-cleft leaves less than half an inch long, and creamy white flowers an inch across. It is native to Mexico.

88735. ECHEVERIA MULTICAULIS Rose. Crassulaceae.

No. 3625. Collected July 17, 1930. A succulent with a stem 1 to 2 feet high bearing a rosette of spatulate leaves 1 to 2 inches long and bright-colored flowering branches with racemes of small flowers which are reddish outside and yellowish within. It is native to the State of Guerrero, Mexico.

88736. MEDICAGO ARBOREA L. Fabaceae. **Tree alfalfa.**

From Athens, Greece. Seeds obtained by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received August 5, 1930.

A form with small leaves growing in the botanic garden.

88737. TRITICUM TURGIDUM L. Poaceae. **Poulard wheat.**

From Greece. Seeds collected by David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received August 5, 1930. From the island of Rhodes at an altitude of 1,200 feet.

88738 to 88772.

From Ventimiglia, Italy. Seeds presented by S. W. McLeod Braggins, Superintendent of the La Mortola Gardens, through

88738 to 88772—Continued.

David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received August 5, 1930.

88738. ALOE STRIATA Haw. Liliaceae.

Variety *hanburiana*.

For previous introduction see No. 88733.

88739. COTYLEDON MACRANTHA Berger. Crassulaceae.

A many-branched succulent undershrub up to 3 feet high with opposite, smooth, fleshy obovate leaves and flower stalks 10 inches high bearing umbellate clusters of bright red flowers, greenish yellow inside. It is native to South Africa.

88740. COTYLEDON ORBICULATA L. Crassulaceae.

A succulent plant up to 4 feet high, with opposite nearly circular mealy leaves which have red margins and panicles of large reddish flowers. It is native to South Africa.

For previous introduction see No. 78194.

88741 to 88743. CRASSULA spp. Crassulaceae.

88741. CRASSULA CONJUNCTA N. E. Brown.

A slightly shrubby succulent with stems erect from a decumbent base, connate-perfoliate, fleshy, broadly ovate leaves about an inch long, and terminal cymes of pure white flowers. It is native to South Africa.

88742. CRASSULA PERFOLIATA L.

A shrubby succulent with thick glaucous connate leaves and cymes of bright-crimson flowers. It is native to South Africa.

For previous introduction see No. 78198.

88743. CRASSULA PORTULACEA Lam.

A much-branched succulent shrub 10 to 12 feet high, with opposite, obliquely ovate, thick leaves 1 to 2 inches long, and corymbose panicles of small rosy flowers. It is native to South Africa where the roots are said to be eaten by the natives.

88744 to 88751. ECHEVERIA spp. Crassulaceae.

88744. ECHEVERIA AMOENA L. de Smet.

A nearly stemless succulent with small dense rosettes of thick leaves and slender scapes 4 to 8 inches high, bearing 1-flowered to 8-flowered racemes of red flowers. Native to Mexico.

For previous introduction see No. 81154.

88745. ECHEVERIA EDULIS Hort.

A name for which a place of publication or description has not been found.

88746. ECHEVERIA GIBBIFLORA DC.

An erect succulent about 2 feet high with a close rosette of obovate-spatulate, highly colored leaves and a lax panicle of small flowers. It is native to Mexico.

88738 to 88772—Continued.

88747. ECHEVERIA GIBBIFLORA DC.

Variety *carunculata.*

88748. ECHEVERIA GLAUCA Baker.

A stemless succulent with small dense rosettes of nearly orbicular, very pale, slightly glaucous leaves having a purple mucro. The flowers are borne in a small secund raceme. It is native to Mexico.

88749. ECHEVERIA IMBRICATA Deleuil.

Said to be a hybrid between *Echeveria glauca* and *E. metallica.*

88750. ECHEVERIA MULTICAULIS Rose.

For previous introduction and description see No. 88735.

88751. ECHEVERIA PACHYPHYTIOIDES L. de Smet.

Said to be a cross between *Pachyphytum bracteosum* and *Echeveria metallica.*

88752. KALANCHOE ROTUNDIFOLIA Haw. Crassulaceae.

A succulent perennial 1 to 3 feet high with a slender stem which has a few leaves at the base and is naked above. The fleshy leaves, 1 to 2 inches long, vary in shape from broadly obovate to spatulate, and are entire or crenate. The small orange or yellow flowers are borne in flat-topped panicles. Native to South Africa.

For previous introduction see No. 86235.

88753 to 88757. SEDUM spp. Crassulaceae. **Stonecrop.**

88753. SEDUM ACRE MAJUS Masters.

A form which is larger and more robust than the type, having deltoid-ovoid leaves in 7 rows, and 2-parted cymes of yellow flowers nearly an inch across. It is native to Morocco.

88754. SEDUM COMPRESSUM Rose.

A prostrate succulent with closely set, flat spatulate leaves 1 to 2 inches long, and erect or ascending flowering branches bearing secund racemes of bright-yellow flowers. It is native to Mexico.

88755. SEDUM DENDROIDEUM Moc. and Sesse.

A smooth, much-branched, shrubby succulent a foot high, with fleshy, flat, obovate to spatulate leaves, 1 to 2 inches long, and numerous bright-yellow flowers in a paniculate cyme. It is native to Mexico.

88756. SEDUM MULTICEPS Coss. and Dur.

A dwarf, subshrubby succulent up to 6 inches high with flexuous barren shoots having dense rosettes of pinkish, papillose, linear leaves at their tips and taller erect flowering shoots bearing scorpioid cymes of pale yellow flowers half an inch across. It is native to Algeria.

88757. SEDUM PACHYPHYLLUM Rose.

A spreading or erect much-branched succulent, up to a foot high, with closely set terete glaucous leaves 1 to 3 inches long and nearly half an inch in diameter and weak flowering stems less than an inch long, bearing cymose clusters of yellow flowers. It is native to Mexico.

88758 to 88772. SEMPERVIVUM spp. Crassulaceae. **Houseleek.**

88758. SEMPERVIVUM ARBOREUM L.

A handsome plant, 2 feet high, with striking rosettes of leaves and attractive yellow flowers.

For previous introduction see No. 81187.

88759. SEMPERVIVUM BALSAMIFERUM (Webb and Berth.) Schenk.

A shrubby succulent with rosettes of spatulate leaves which are viscous with a balsamlike substance. The yellowish flowers are in panicles. It is native to the Canary Islands.

88760. SEMPERVIVUM BERTHELOTIANUM (Bolle) Christ.

A nearly stemless fleshy plant with a dense rosette of yellowish green narrowly spatulate white-ciliate leaves and 6 to 10 pale-yellow flowers on a scape a foot or more high. Native to the Canary Islands.

For previous introduction see No. 81189.

88761. SEMPERVIVUM CHLOROCHRYSUM Hort.

A horticultural variety for which a place of publication or description has not been found.

For previous introduction see No. 81191.

88762. SEMPERVIVUM CUNEATUM (Webb and Berth.) Christ.

A fleshy evergreen plant nearly 3 feet high, with wedge-shaped leaves and terminal cymes of yellow flowers.

For previous introduction see No. 81193.

88763. SEMPERVIVUM GLUTINOSUM Ait.

A viscous perennial, 1½ feet high, with large spatulate fleshy leaves and yellow flowers in terminal cymes. Native to Madeira.

For previous introduction see No. 81195.

88764. SEMPERVIVUM HAWORTHII Salm-Dyck.

A succulent evergreen perennial with a woody stem and yellow flowers. Native to the Canary Islands.

For previous introduction see No. 81196.

88765. SEMPERVIVUM HYBRIDUM Bruegg.

A natural hybrid between *Sempervivum montanum* and *S. doellianum,* closely resembling the latter. Native to Switzerland.

For previous introduction see No. 81198.

88766. SEMPERVIVUM MANRIQUEORUM (Bolle) Christ.

A shrubby succulent 2 to 3 feet high with long-spatulate leaves with red veins and densely ciliate margins and corymbs of golden-yellow flowers on

88738 to 88772—Continued.

stems about 6 inches long. It is native to the Canary Islands.

88767. SEMPERVIVUM MARGINATUM Hort.

A name for which a place of publication or description has not been found.

88768. SEMPERVIVUM POCULIFORME Berg. and Wildem.

A herbaceous succulent with the oblong-lanceolate basal leaves in a rosette and the stem leaves obovate-spatulate. The simple erect stem bears a glabrous panicle of yellow flowers. Probably native to the Canary Islands.

For previous introduction see No. 81199.

88769. SEMPERVIVUM URBICUM C. Smith.

A shrubby succulent with a simple stout erect stem about 3 feet high and covered with leaf scars. The thick pale-green narrowly spatulate leaves are borne in a rosette at the top of the stem. The large pyramidal panicle of pale-yellow flowers is 3 feet high and nearly as broad. Native to the Canary Islands.

For previous introduction see No. 81200.

88770. SEMPERVIVUM VELUTINUM N. E. Brown.

A succulent plant about 2 feet high, with rosettes 6 to 9 inches broad of crowded spatulate velvety leaves 3 to 4 inches long, grayish green above and with darker green lines beneath. The bright-yellow flowers are in a compact cyme. Known only in cultivation.

For previous introduction see No. 81201.

88771. SEMPERVIVUM WEBBII (Bolle) Schenk.

A shrubby succulent, closely resembling *S. arborescens*, with deltoid-spatulate leaves and corymbs of pale-yellow flowers. Native to the Canary Islands.

88772. SEMPERVIVUM YOUNGIANUM (Webb and Berth.) Christ.

A fleshy plant with a thick woody stem, and thick shining dark-green obcordate-spatulate leaves with short hairs along the margins. Native to the Canary Islands.

For previous introduction see No. 81208.

88773 to 88775. CITRUS GRANDIS (L.) Osbeck. Rutaceae. **Grapefruit.**

From Szechwan, China. Seeds presented by L. A. Lovegren, Kiating, through D. J. Moriarty, Department of Commerce, Washington, D. C. Received August 6, 1930.

88773. *Kwei gan* (large).

88774. *Kwei gan* (average size).

88775. *Kwei gan* (very large).

88776. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

From Chosen. Roots collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 7, 1930.

88776—Continued.

No. 5990. June 28, 1930. Collected on the bank of the Seinonko River, opposite Kokai, in 41° N. lat., Heian Hokudo Prefecture, Chosen. The temperature here falls as low as 40° below zero, and the ground freezes to a depth of 2½ feet. This grass forms a very compact sod and seeds abundantly.

88777 to 88836. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Manchuria and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 7, 1930.

88777 and 88778. Collected June 13, 1930, from a pile of beans swept up from the floors of bean-storage houses, Dairen.

88777. No. 5897. Mixture of yellow, greenish yellow, black, and brown seeds of varieties from various places in northern and southern Manchuria.

88778. No. 5898. A mixture of varieties from various places in northern and southern Manchuria; mostly yellow-seeded sorts.

88779 and 88780. Collected June 6, 1930, from waste beans in the open storage yards of the South Manchurian Railway, Dairen.

88779. No. 5899. Mixture of yellow-seeded (small percentage of greenish yellow) varieties from various places in northern and southern Manchuria.

88780. No. 5900. Mixture of yellow and greenish yellow seeded varieties from various places in northern and southern Manchuria.

88781 to 88783. Collected June 14, 1930, from bean-storage warehouses in the South Manchurian Railway storage yards, Dairen.

88781. No. 5903. Mixture sample of yellow varieties used for oil and oil cakes.

88782. No. 5905. Mixture of yellow-seeded varieties. Used for bean oil and bean cake.

88783. No. 5906. Mixture of yellow-seeded varieties, said to have come from northern Manchuria. Used for oil and oil cakes.

88784 and 88785. Collected June 14, 1930, from a mixed-storage warehouse in the storage yards of the South Manchurian Railway, Dairen.

88784. No. 5907. Mixture of yellow-seeded varieties, said to have come from northern Manchuria.

88785. No. 5909. Mixture of yellow-seeded varieties, said to have come from northern Manchuria. Used for bean oil and bean cake.

88786. No. 5911. Collected June 14, 1930, from a bean warehouse in the South Manchurian Railway storage yards, Dairen. Mixture of yellow-seeded varieties, said to have come from northern Manchuria. Used for oil and oil cake.

88777 to 88836—Continued.

88787. No. 5912. Collected June 14, 1930, from a mixed-storage warehouse of the South Manchurian Railway storage yards, Dairen. Mixture of yellow-seeded varieties, said to have come from northern Manchuria. Used for oil and oil cake.

88788 to 88790. Collected June 14, 1930, from a bean warehouse in the South Manchurian Railway storage yards, Dairen.

88788. No. 5913. Mixture of black-seeded varieties, said to have come from along the Liao River in the Kaiyuan district. Used for green manure.

88789. No. 5914. Mixture of yellow-seeded varieties used for oil and oil cake.

88790. No. 5915. Mixture of yellow-seeded varieties used for oil and oil meal.

88791. No. 5916. Collected June 14, 1930, from a bean warehouse at a wharf of the South Manchurian Railway storage yards, Dairen. Mixture of yellow-seeded varieties, said to have come from northern Manchuria. Used for bean oil and bean cake.

88792 and 88793. Collected June 14, 1930, from a bean warehouse in the South Manchurian Railway storage yards, Dairen.

88792. No. 5917. Mixture of yellow-seeded varieties used for oil and oil cake.

88793. No. 5918. Mixture of yellow-seeded varieties used for oil and oil cake.

88794. No. 5922. Obtained June 16, 1930, from Chinese soybean oil mill, Dairen. Mixed yellow-seeded varieties. Used for oil and oil cake.

88795. No. 5923. Obtained June 16, 1930, from a bean-storage warehouse of the South Manchurian Railway, Dairen. Yellow-seeded varieties used for oil and oil meal.

88796. No. 5924. Collected June 16, 1930, in the open storage yards of the South Manchurian Railway, Dairen. Yellow-seeded varieties used for oil and oil cake.

88797. No. 5925. Collected June 16, 1930, from Chinese oil (soybean) mill, Dairen. Mixture of yellow-seeded varieties used for oil and oil meal.

88798. No. 5926. Collected June 16, 1930, at a bean-storage warehouse of the South Manchurian Railway, Dairen. Used for oil and oil meal.

88799. No. 5927. Collected June 16, 1930, from a bean warehouse in the storage yards of the South Manchurian Railway, Dairen. Mixture of yellow-seeded varieties. Used for oil and oil cake.

88800. No. 5988. Collected June 16, 1930, in open storage yards of the South Manchurian Railway, Dairen. Yellow-seeded varieties used for oil and oil cake.

88801. No. 5930. Obtained June 16, 1930, from a wharf storage warehouse in the yards of the South Manchurian Railway, Dairen. Black-seeded varieties, said to have come from the Yingkon district. Used for green manure.

88777 to 88836—Continued.

88802. No. 5931. Collected June 16, 1930, at Chinese oil mills, Dairen. Yellow-seeded varieties, said to have come from the Kaiyuan district. Used for oil and oil meal.

88803. No. 5932. Collected June 16, 1930, in open storage yards of the South Manchurian Railway, Dairen. Yellow-seeded varieties used for oil and oil cake.

88804 and 88805. Obtained June 16, 1930, at Chinese oil mills, Dairen.

88804. No. 5933. Mixed yellow-seeded varieties used for oil and oil cake.

88805. No. 5934. Mixed yellow-seeded varieties, said to be grown in the Mukden district and used for oil and oil cake.

88806. No. 5935. Collected June 16, 1930, from a bean-storage warehouse of the South Manchurian Railway, Dairen. Used for oil and oil cake.

88807. No. 5936. Collected June 16, 1930, at Chinese soybean oil mill, Dairen. Mixture of yellow-seeded varieties from the Kaiyuan district, used for oil and oil cake.

88808 to 88815. Purchased June 27, 1930, from a farmer at Kokai, Heian Hokudo Prefecture, Chosen.

88808. No. 5966. *Mota* (noneye). Mixture of medium-sized, oval, yellow-seeded varieties.

88809. No. 5968. *Seita* (green). Medium-sized, greenish yellow, oval, light-brown hilum.

88810. No. 5967. *Orukon* (early). Mixture of medium-sized yellow and greenish yellow varieties.

88811. No. 5969. *Pakute* (white). Medium sized, oval, light yellow with pale hilum.

88812. No. 5970. *Seita* (green). Medium sized, oval, bluish green with slate-black hilum.

88813. No. 5971. *Ryumuo* (nonhair yellow). Medium sized, oval, yellow with slate-black hilum.

88814. No. 5972. *Mote* (white eye). Mixture of medium-sized, oval, yellow-seeded varieties.

88815. No. 5973. *Orukon* (early). Medium sized, oval, yellow with dark-brown hilum.

88816 to 88826. Obtained June 28, 1930, from the Kokai Village Seed & Nursery Co., Kokai, Heian Hokudo Prefecture, Chosen.

88816. No. 5976. *Hota.* Medium small, oval, very light yellow with pale hilum.

88817. No. 5977. *Waseshoryumouta* (small early). Large, oval, very light yellow with pale hilum.

88818. No. 5978. *Yota* (Manchuria). Medium sized, oval, glossy yellowish green with pale hilum. Long linear leaves, 4-seeded pods.

88777 to 88836—Continued.

88819. No. 5979. *Hotenhakubi* (Mukden white). Medium large, oval, very light yellow with pale hilum.

88820. No. 5980. *Heihokuta.* Large, oval, very light yellow with pale hilum.

88821. No. 5981. *Heihokuta No. 16.* Medium sized, oval, very light yellow with pale hilum.

88822. No. 5982. *Hayata* (early). Very large, oval, very light yellow with pale hilum.

88823. No. 5983. *Aota* (green). Large oval, yellowish green with black hilum. Germ yellow.

88824. No. 5984. *Shokeimei* (early). Medium sized, oval, very light yellow with chocolate-brown hilum.

88825. No. 5985. *Tsurunoko* (crane's eggs). Large, oval, very light yellow with pale hilum.

88826. No. 5986. *Kurugara* (black pod). Medium small, oval, very light yellow with pale hilum.

88827 to 88836. Obtained June 29, 1930, from the Kisen Village Agriculture Society, Kisen, Heian Hokudo Prefecture, Chosen.

88827. No. 5991. *Tokusen.* Mixture of yellow (glossy), medium-small seeded varieties grown by the Korean farmers about Kisen.

88828. No. 5992. *Tokusen.* Medium sized, oval, glossy yellow with pale hilum. First grade.

88829. No. 5993. *Tokusen.* Medium-large oval seed of mixed yellow varieties.

88830. No. 5994. *Heihokuta.* Medium large, oval, glossy yellow, pale hilum. Excellent grade, used for tofu, miso, and soy sauce.

88831. No. 5995. *Heihokuta.* Mixed sample of medium-sized, oval, yellow-seeded varieties.

88832. No. 5996. *Heihokuta.* Medium large, oval, light yellow with pale hilum.

88833. No. 5997. *Heihokuta.* Grade No. 1. Medium large, oval, glossy yellow with pale hilum.

88834. No. 5998. *Heihokuta.* Mixture of medium-large, oval, glossy, yellow-seeded varieties.

88835. No. 5999. *Heihokuta.* Mixture of medium-sized, glossy, yellow-seeded varieties.

88836. No. 6000. *Heihokuta.* Mixture of yellow-seeded varieties.

88837 to 88856.

From Chosen and Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 7, 1930.

88837. ASTRAGALUS sp. Fabaceae.

No. 5850. Collected June 9, 1930, from plants along the roadside in the vicinity of Ta Fang Shen, Manchuria. This species makes a very early, small growth and is found on poor dry soil.

88837 to 88856—Continued.

88838 and 88839. ASTRAGALUS SCABERRIMUS Bunge. Fabaceae.

Collected June 9, 1930, from plants along the mountain sides, near Kohaton, Manchuria. A decumbent perennial covered with short stiff hairs. The compound leaves are made up of 9 to 13 oblong leaflets, and the white and purple flowers are in axillary clusters. It is native to China.

88838. No. 5820.

88839. No. 5885.

88840. LATHYRUS sp. Fabaceae.

No. 5849. Collected June 9, 1930, from plants along the roadside in vicinity of Ta Fang Shen, Manchuria. An early maturing vetch growing abundantly along the roadside and a very heavy seeder. Makes a fairly good early spring growth.

88841. MELICA SCABROSA Trin. Poaceae. **Grass.**

No. 5939. Collected June 19, 1930, from plants along the road of the wall surrounding the city of Chinchon, Manchuria. A perennial grass with narrowly lanceolate leaves and an open panicle of rather large spikelets. It is native to China.

88842 to 88846. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

This is a hardy grass used for lawns, golf fairways, and airports.

88842. No. 5895. Collected July 6, 1930, from plants along the hillsides near Hoshinoya, about 8 miles south of Dairen.

88843. No. 5941. Collected June 23, 1930, from plants along the roadsides in foothills near Rokotan, about 5 miles south of Dairen.

88844. No. 5942. Collected June 23, 1930, from plants along edge of field in foothills about 2 miles from Chinchon.

88845. No. 5960. Collected June 25, 1930, from plants along a bank of the Seisenko River, Kisen, Chosen.

88846. No. 5961. Collected June 26–28, 1930, from plants along the Seinonko River bank opposite the Kokai side; Kokai, Heian Hokudo Prefecture, Chosen.

88847 and 88848. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

88847. No. 5908. Obtained June 14, 1930, from a warehouse in the yards of the South Manchurian Railway, Dairen. Mixture of adsuki-bean varieties.

88848. No. 5929. Collected June 16, 1930, in a storage warehouse of the South Manchurian Railway, Dairen. Medium-sized, red adsuki beans used for making various kinds of adsuki confections.

88849 to 88851. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

Collected June 14, 1930, from a warehouse in the South Manchurian Railway yards, Dairen.

88837 to 88856—Continued.

88849. No. 5902. Medium-small, light-green mung bean used for sprouts, bean vermicelli, and bean noodles.

88850. No. 5901. Medium-small, light-green mung bean said to have come from northern Manchuria; used for sprouts, bean noodles, and bean vermicelli.

88851. No. 5904. Medium-small, light-green bean used for sprouts, bean noodles, and bean vermicelli.

88852. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

No. 5910. Collected June 14, 1930, from a warehouse in the South Manchurian Railway yards, Dairen. Used extensively for food and also for cattle feed.

88853. PRUNUS TOMENTOSA Thunb. Amygdalaceae. **Manchu cherry.**

No. 5975. *Yusuraume.* Purchased June 27, 1930, at a small Korean store in Kokai, Heian Hokudo Prefecture, Chosen. A small bright-red fruit, somewhat sour; grows wild in mountain sections. Kokai is in 41° N. lat., and the temperature goes as low as 40° F. below zero.

88854. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

No. 5962. Collected June 21, 1930, from plants along the River Seinonko, opposite Kokai, Heian Hokudo Prefecture, Chosen. The clover was growing quite abundantly in rather sandy soil; it makes a very good growth. Nothing is known of its source.

88855. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

No. 5963. Collected June 26, 1930, along a bank of the Seinonko River, opposite the village of Kokai, Heian Kokudo Prefecture, Chosen. This clover is growing in abundance along the river bank and forms a rather compact sod. It is crowding out other plant species, such as *Zoysia pungens.*

88856. ZEA MAYS L. Poaceae. **Corn.**

No. 5974. *Okususu.* Purchased June 27, 1930, from a Korean farmer at Kokai, Heian Hokudo Prefecture, Chosen.

88857. FREESIA sp. Iridaceae.

From Naples, Italy. Seeds presented by M. Herb, through David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received August 8, 1930.

No. 3609. June 1930. This lot may contain some of the varicolored forms that were originated by the plant breeder Ragioneri in Florence.

88858. GENISTA sp. Fabaceae.

From the island of Crete. Seeds collected by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received August 8, 1930.

No. 3604. June 29, 1930. On the mountain slopes overlooking the plains of Messara, Crete, route to Phestos. This shrub should be very ornamental in the dry mountain climate of California and Arizona. May prove a good rock plant also.

88859. PRUNUS CERASUS MARASCA (Host) C. Schneid. Amygdalaceae. **Maraschino cherry.**

From Yugoslavia. Seed obtained by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received August 8, 1930.

No. 3612. July 7, 1930. From fruits for sale on the market at Spalato.

88860. ZEA MAYS L. Poaceae. **Corn.**

From Kruja, Albania. Seed purchased by David Fairchild, agricultural explorer, Bureau of Plant Industry, with the Allison V. Armour expedition. Received August 8, 1930.

No. 3610. July 5, 1930. Field corn from the village of Kruja. It is the variety commonly grown in the mountains of Albania.

88861 to 88863.

From Medan, Sumatra. Seeds presented by L. A. Lorzing, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received August 8, 1930.

88861. ACTINORHYTIS CALAPPARIA Wendl. and Drude. Phoenicaceae. **Palm.**

A robust palm 40 feet high, with a smooth stem conspicuously ringed, large pinnate leaves 9 feet long and 6 feet wide, and a large pendulous cluster of small flowers followed by ovoid red fruits 3 inches long. Native to the East Indies.

For previous introduction see No. 78467.

88862. SAGUERUS sp. Phoenicaceae. **Palm.**

88863. XIPHIDIUM COERULEUM Aubl. Haemodoraceae.

An irislike plant, native to tropical America, with oblong-lanceolate leaves 1 to 2 feet long and a compound raceme of small white or blue flowers.

88864. ARECA TRIANDRA Roxb. Phoenicaceae. **Palm.**

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens. Received August 11, 1930.

A graceful, spineless palm, ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of olives, are orange scarlet. Native to India.

For previous introduction see No. 70777.

88865. ZEPHYRANTHES sp. Amaryllidaceae. **Zephyrlily.**

From Tucuman, Argentina. Bulbs collected by S. Venturi. Received August 20, 1930.

Collected in Saimbon, Department of Tafi, at an altitude of 4,500 to 5,000 feet.

88866. ORYZA SATIVA L. Poaceae. **Rice.**

88866—Continued.

From Amritsar, India. Seeds presented by Dr. Tara Chand, through C. E. Chambliss, Bureau of Plant Industry. Received August 20, 1930.

Grown under irrigation in the Punjab region.

88867. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From New South Wales, Australia. Plants purchased from Swane Bros., Enterprise Nurseries, Ermington. Received August 21, 1930.

Taylor's Anniversary Red.

88868. ADONIDIA MERRILLII Beccari (*Normanbya merrillii* Beccari). Phoenicaceae. **Palm.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry, Manila. Received August 21, 1930.

Bonga de China or *bonga de Jolo.* A medium-sized palm with graceful, somewhat-curved pinnate leaves, resembling the common betel-nut palm, but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see No. 81851.

88869 to 88893.

From Africa. Cuttings and seeds collected by Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received August 21, 1930.

88869. ALOE ANTANDROE Hort. Liliaceae.

Cutting. A name for which a place of publication or a description has not been found.

88870. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

No. 59. Semicling, white flesh. From the market at Bone, Algeria, July, 1930.

88871. CITRUS LIMONIA Osbeck. Rutaceae. **Lemon.**

Ba Ahmed. From Morocco.

88872 to 88893. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

88872 to 88876. *Beni Amar* (*Zerhoun*). From Virelizier Garden, Mekinez (Mekness), Morocco.

88872. No. XXIV–A. Tree about 10 years old. Fruit of average color, maturing at the beginning of June.

88873. No. XXIV–B. Tree about 10 years old; fruit matures about the first days of June.

88874. No. XXV–A. Tree 8 to 10 years old; fruits begin maturing in June.

88875. No. XXV–B. Tree about 10 years old; fruit matures toward the end of May.

88876. No. XXVI–A. Tree 8 to 10 years old; fruit matures at the end of May.

88877 to 88880. From Virelizier Garden, Mekinez (Mekness), Morocco.

88869 to 88893—Continued.

88877. No. XXVI–B. *Zerhoun Caid Khacem.* Vigorous trees with large, colored fruits which mature at the end of May.

88878. No. XXVII–A. *Zerhoun Caid Khacem.* Very vigorous trees. The colored fruits, from average to large in size, mature in June.

88879. No. XXVII–B. *Meknes.* Fruits mature during June; production average.

88880. No. XXVIII–A. Fruits mature at the end of June.

88881 to 88884. From Jardin de la Residence, Fez, Morocco.

88881. No. XXXI–A. Tree No. 2. Fruit small, colored, and fragrant; matures between the middle of May and the middle of June; production average.

88882. No. XXXI–B. Tree No. 3. Fruit below average in size, fragrant, and of good flavor; pit nonclinging; matures in June; production very heavy.

88883. No. XXXI–C. Tree No. 5. Fruits small and sour, maturing in July; production very heavy.

88884. No. XXXI–D. Tree No. 6. Fruit small, slightly colored and of good flavor; matures in July; production average.

88885 and 88886. From Jardin de Bellevue, Fez, Morocco.

88885. No. XXXII–A. Tree No. 1. Fruit large, slightly colored and fragrant; pit flat and pointed, nonclinging; matures at the end of June; production average.

88886. No. XXXII–B. Tree No. 1. The highly colored fruit is average in size and fragrant; pit small, nonclinging; matures in June; production very heavy.

88887. No. XXXIII–A. From Jardin de Dar Tazi, Fez, Morocco. Tree No. 2. Fruit large, colored, and very fragrant; pit very large, plump, and slightly pointed; nonclinging, matures during the last half of May; production large.

88888. No. XXXIV–A. From Ecole Lamtyin, Fez, Morocco.

Tree No. 1. Fruit average in size; colored and very fragrant; pit small and nonclinging; matures by the middle of May.

88889 to 88893. From Jardin de M. Sultana, Fez, Morocco.

88889. No. XXXV–A. An early type, maturing during the last half of May.

88890. No. XXXV–B. An early type maturing about the 22d of May.

88891. No. XXXV–C. An early type maturing about the 20th of May.

88892. No. XXXV–D. *Oued Fes lot Dimeglio.* An early type maturing about May 25.

88893. No. XXXV–E. Fruit matures about May 30.

88894 to 88899.

From north Africa. Seeds and cuttings collected by Prof. F. T. Bioletti, University of California, and Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received August 21, 1930.

88894 to 88897. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Seeds from M. Flous, Sefron, near Sfax, Morocco.

88894. No. XXXVII. Clingstone, plus medium size, golden yellow hue.

88895. No. XXXVIII–A. Creamy yellow or yellow hue, pebble size (very small), clingstone, reddening on side exposed to the sun.

88896. No. XL. Golden yellow hue, freestone, huge fruit similar to Gloire I' Auvergue, red spots on the sunny side.

88897. No. XXXIX. Golden yellow hue, freestone, few dark spots; more than medium size.

88898. PRUNUS sp. Amygdalaceae. **Plum.**

(Heat resistant.) Cuttings of a plum from Jolan, Morocco.

88899. PRUNUS sp. Amygdalaceae. **Plum.**

Belciana. Cuttings of a plum from Rabat, Morocco.

88900 to 88934.

From Africa. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received August 21, 1930.

88900. AMMOPHILA ARENARIA (L.) Link. Poaceae. **Beachgrass.**

No. 35. From Mogador, Morocco, July 23, 1930. Used in controlling sand dunes.

88901. ANDROPOGON SERICEUS R. Br. Poaceae. **Grass.**

No. 25. *Queensland blue grass.* From Maison Carree, Algeria, July 9, 1930. A grass, most palatable to stock, very widely distributed in Australia. It grows over 3 feet high on good soil and never less than 1 foot on the worst of soils; keeps green all the year round and is scarcely affected by drought or frost.

For previous introduction see No. 34047.

88902. ARISTIDA ADSCENSIONIS L. Poaceae. **Grass.**

No. 55. From the limestone plains of Mogador, Morocco, July 22, 1930. A tufted weedy annual 6 to 12 inches tall, with dense narrow panicles; the awns of the crowded spikelets are horizontally spreading.

For previous introduction see No. 54396.

88903. BRACHYPODIUM DISTACHYUM (L.) Beauv. Poaceae. **Grass.**

No. 50. From the mountains southwest of Marrakech, Morocco, July 17, 1930. A very stiff, densely branched annual grass, 4 to 12 inches high, upright or ascending in habit. It is found in cultivated fields and along roadsides,

88900 to 88934—Continued.

often in chalky soil, in the Mediterranean countries.

For previous introduction see No. 60363.

88904. BRACHYPODIUM RAMOSUM (L.) Roem. and Schult. Poaceae. **Grass.**

No. 42. From the experiment station, Casa Blanca, July 17, 1930. A blue-green perennial creeping grass, much branched at the base, found in the warmer portions of the Mediterranean countries, especially on chalky soil and in dry rocky places.

For previous introduction see No. 60364.

88905. BROMUS RIGIDUS Roth. Poaceae. **Grass.**

No. 51. From the mountains southwest of Marrakech, Morocco, July 17, 1930. A weedy annual 2 feet tall with hairy foliage and drooping panicles of long awned spikelets. Native to the Mediterranean region.

For previous introduction see No. 53092.

88906. CHAETOCHLOA NIGRIROSTRIS (Nees) Skeels (*Setaria nigrirostris* Dur. and Schinz.). Poaceae. **Grass.**

No. 24. From Maison Carree, Algeria, July 9, 1930. A hardy tufted grass which has made good growth. Although the leaves are a little hard, there is a very large quantity in proportion to the stem; it appears to be a quick succulent grower, carries a good quantity of seed, and grows well in New South Wales.

For previous introduction see No. 46133.

88907. CORONILLA sp. Fabaceae.

No. 37. From the mountains south of Marrakech, Morocco, July 21, 1930.

88908. CYMBOPOGON SCHOENANTHUS (L.) Spreng. (*Andropogon schoenanthus* L.). Poaceae. **Camel hay.**

No. 33. From Morocco, July 19, 1930. Seed of native grass obtained from the experiment station and said to be relished by sheep.

88909. FESTUCA ELATIOR ARUNDINACEA (Schreb.) Celak. Poaceae. **Fescue grass.**

No. 40. From an irrigation ditch, Demnat, Morocco, July 19, 1930.

For previous introduction see No. 25209.

88910. LOTUS sp. Fabaceae.

No. 28. From the experiment station, Casa Blanca, Morocco, July 17, 1930.

88911. LOTUS sp. Fabaceae.

No. 43. From Mogador, Morocco, July 23, 1930.

88912 to 88914. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

88912. No. 29. From Demnat, Morocco, July 19, 1930; wild alfalfa.

88913. No. 30. From Pasha, Demnat, Morocco, July 19, 1930.

88900 to 88934—Continued.

88914. No. 31. From Rabat, Morocco, July 15, 1930. Seed produced at the experiment station, Rabat, from wild seed grown at Demnat.

88915. MELILOTUS ITALICA (L.) Lam. Fabaceae. Sweetclover.

No. 45. From the experiment station, Casa Blanca, Morocco, July 17, 1930.

For previous introduction see No. 30296.

88916. ONONIS sp. Fabaceae.

No. 46. From Mogador, Morocco, July 23, 1930; collected on the sand dunes.

88917. ORYZOPSIS COERULESCENS (Desf.) Hack. Poaceae. Grass.

No. 49. From the mountains southwest of Marrakech, Morocco, July 17, 1930.

88918. PANICUM MILIACEUM L. Poaceae. Proso.

No. 47. From the experiment station, Casa Blanca, Morocco, July 17, 1930.

88919. PANICUM REPENS L. Poaceae. Grass.

No. 41. From the experiment station, Casa Blanca, Morocco, July 17, 1930. A gray-green, creeping or ascending perennial grass up to 2 feet high, native to the Mediterranean countries, and distributed through Asia Minor and tropical Africa. The stout rootstalks of this grass make it difficult to eradicate.

For previous introduction see No. 67999.

88920. SORGHUM VULGARE Pers. Poaceae. Sorghum.

No. 39. From the experiment station, Rabat, Morocco, July 15, 1930.

88921. STIPA PARVIFLORA Desf. Poaceae. Feathergrass.

No. 48. From the mountains southwest of Marrakech, Morocco, July 18, 1930.

88922. STIPA TENACISSIMA Jusl. Poaceae. Feathergrass.

Nos. 52 and 53. From the mountains southwest of Marrakech, Morocco, July 17, 1930.

For previous introduction see No. 31559.

88923. (Undetermined.)

No. 44. From the mountains southwest of Marrakech, Morocco, July 21, 1930.

88924. VICIA NARBONENSIS L. Fabaceae. Vetch.

No. 32. From the experiment station, Marrakech, Morocco, July 19, 1930. Seed originally obtained from a wild plant.

88925. ZEA MAYS L. Poaceae. Corn.

No. 38. From Morocco, July 18, 1930. A type commonly grown.

88926. HORDEUM BULBOSUM L. Poaceae. Grass.

No. 26. From Maison Carree, Algeria, July 9, 1930.

For previous introduction see No. 78781.

88927. HYPARRHENIA HIRTA (L.) Stapf. (*Andropogon hirtus* L.). Poaceae. Grass.

88900 to 88934—Continued.

No. 34. From the mountains south of Bone, Algeria, July, 1930.

For previous introduction see No. 75897.

88928. LOLIUM MULTIFLORUM Lam. Poaceae. Italian ryegrass.

No. 23. From Maison Carree, Algeria, July 9, 1930.

88929. MEDICAGO ARBOREA L. Fabaceae. Tree alfalfa.

No. 20. From Maison Carree, Algeria, July 9, 1930.

88930. MEDICAGO SATIVA GAETULA Urban. Fabaceae. Alfalfa.

No. 19. From the Institut Agricole d'Algeria, Maison Carree, Algeria, July, 1930.

88931. ORYZOPSIS MILIACEA (L.) Benth. and Hook. Poaceae. Grass.

No. 21. *Smilo grass.* From Maison Carree, Algeria, July 9, 1930. A perennial grass, native to the Mediterranean region, and known in Australia as velt grass. In California it has been called Smilo grass, San Diego grass, mountain rice, and many-flowered millet. Under California conditions it has exhibited considerable promise. It has been generally introduced into Australia and New Zealand, where it possesses considerable merit.

For previous introduction see No. 66815.

88932. PENNISETUM VILLOSUM R. Br. Poaceae. Grass.

No. 22. From Maison Carree, Algeria, July 9, 1930.

88933. PHALARIS BULBOSA Jusl. Poaceae. Grass.

No. 27. From Maison Carree, Algeria, July 9, 1930. A perennial tufted grass with shiny leaves about two-fifths of an inch wide and roots penetrating the soil to a depth of nearly 3 feet; native to the Mediterranean countries. It is now cultivated in New South Wales, where it appears to be an excellent permanent winter grass for coastal and table-land districts. Owing to its deep roots it can endure a considerable amount of drought. The seeds are borne very sparsely on short stems which stand up in the center of the crown.

For previous introduction see No. 63974.

88934. TRIFOLIUM sp. Fabaceae. Clover.

No. 36. From the Roman amphitheater at Churchill, Algeria, July 10, 1930.

88935. ARGANIA SPINOSA (L.) Skeels (*A. sideroxylon* R. and S.). Sapotaceae. Argan.

From Morocco. Seeds collected by Knowles A. Ryerson and H. L. Westover, agricultural explorers, Bureau of Plant Industry. Received August 22, 1930.

No. 61. From near Bigoudin, July 21, 1930. The argan tree of western Morocco is very limited in its range, occurring only in that part of the African Continent. It grows to a large size and bears an abundance of light-yellow fruits somewhat resembling small plums in shape. Cattle and

88935—Continued.

goats are said to feed upon these fruits, which are exceedingly acrid. The seeds are very thick-walled and contain an oil which is used as food and also for illuminating purposes. Apparently the tree is not injured by considerable frost, and it may thrive wherever the hardy citrus grows.

For previous introduction see No. 80669.

88936. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Morocco. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received August 22, 1930.

No. 58. From Agourai, July 23, 1930. A wild alfalfa.

88937 to 88946. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Morocco. Seeds collected by Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received August 22, 1930.

Nos. 88937 to 88939 are from Ben Halima Garden, Mekness.

88937. No. XXI. Tree with rather spiny, arched branches and small leaves. Flowers about March 10 to 15; fruit somewhat red, ripening about June 20, averaging 65 to the 2.2 pounds.

88938. No. XXII. Tree with somewhat spiny, erect branches and small, evergreen leaves. It blooms about March 10 to 15 and the fruit ripens about June 25. The very small, yellow fruit averages about 155 to the 2.2 pounds.

88939. No. XXIII. Tree with slightly spiny, arched branches and large leaves; blooms March 15 to 20. The pink fruit ripens about June 30 and is quite large, averaging 33 to the 2.2 pounds.

88940. No. 13. From Paris Lyons Marseilles Garden, Marrakech.

Nos. 88941 to 88946 are from H. Brayard, Marrakech.

88941. No. 2. *Ferdi.*

88942. No. 3. *Ferdi.*

88943. No. 1. *Majorelli.*

88944. From Arnaud Farm.

88945. No. 1. *Zachetti.*

88946. No. 2. *Zachetti.*

88947. (Undetermined.)

From Fort Dauphin, Madagascar. Seeds presented by P. B. Stolee. Received August 22, 1930.

Voaloboka-gasy. An unidentified plant known as native grape, said to be used as a stock for grafting true grapes. Its 1-seeded fleshy fruits are eaten by natives, but are not agreeable to foreigners.

88948 to 88965. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Morocco. Seeds collected by Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received August 25, 1930.

88948 to 88965—Continued.

88948. No. 11. From Menara, Marrakech.

Nos. 88949 to 88954 are from Ba Ahmed, Marrakech.

88949. No. 6.

88950. No. 5.

88951. No. 8.

88952. No. 7.

88953. No. 1.

88954. No. 2.

88955. No. 17. From H. Brayard, Marrakech.

88956. No. 1. From Ba Ahmed, Marrakech.

88957. No. 18. From H. Brayard, Marrakech.

88958. No. 14. From Paris Lyons Marseilles Garden, Marrakech.

88959. No. 15. From Compagnie Fermiere, Marrakech.

88960. No. 9. From Ba Ahmed, Marrakech.

88961. No. 10. From Ba Ahmed, Marrakech.

88962. No. 14. From Paris Lyons Marseilles Garden, Marrakech.

88963. No. 5. From Ba Ahmed, Marrakech.

88964. No. 7. From Ba Ahmed, Marrakech.

88965. No. 19. From Woehr Place (H. Brayard), Marrakech.

88966. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

From Kokai, Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 25, 1930.

No. 6010. July 6, 1930.

For previous introduction and description see No. 88776.

88967 to 89015.

From Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received August 25, 1930.

88967. AGROPYRON CILIARE (Trin.) Franch. Poaceae. **Grass.**

No. 5873. From mountain south of Dairen, July 10, 1930. A tall-growing short-awned grass. May be of value in the Northwest.

For previous introduction see No. 64765.

88968 to 88989. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

88968. No. 6004. From a river bank near Impukujoshi, July 14, 1930. Said to be a wild species of alfalfa. It is a blue-flowered form, procumbent in habit.

88969. No. 6011. From a road along the west wall of Chinchon, July 17, 1930. An erect plant with light-

88967 to 89015—Continued.

blue flowers. Probably introduced by the Russians during their occupation.

88970. No. 6012. From road of north wall of city of Chinchon, Manchuria, July 17, 1930. These seeds were collected from several plants which are procumbent with flowers varying in color from light blue to pinkish blue. Not known when introduced, but probably brought by Russians when they occupied this territory.

88971 to 88989. From single plants along road of north wall of Chinchon, Manchuria, July 17, 1930. Probably introduced by Russians during their occupation.

88971. No. 6016. Plant procumbent, with pale-blue flowers.

88972. No. 6014. Plant procumbent, with pale-blue flowers.

88973. No. 6015. Plant semierect, with pale-blue flowers.

88974. No. 6016. Plant procumbent, with blue flowers.

88975. No. 6017. Plant procumbent, with blue flowers.

88976. No. 6018.

88977. No. 6019.

88978. No. 6020. Plant procumbent, with pale blue flowers.

88979. No. 6021.

88980. No. 6022. Plant procumbent, very prolific, with blue flowers.

88981. No. 6023. Plant semiprocumbent, with blue flowers.

88982. No. 6024. Plant semiprocumbent, with blue flowers.

88983. No. 6025.

88984. No. 6026.

88985. No. 6027.

88986. No. 6028. Plant semiprocumbent, with purple flowers.

88987. No. 6029.

88988. No. 6030.

88989. No. 6031.

88990. MELILOTUS SUAVEOLENS Ledeb. Fabaceae. **Sweetclover.**

No. 5871. July 8, 1930. From plants along roadside, near Ta Fang Shen, Manchuria. Plants vary considerably in time of maturity and in plant characters. Some plants with mature seed still have green foliage, while others with mature seed are dead.

For previous introduction see No. 61320.

88991 to 88995. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

For previous introduction see No. 88776.

88991. No. 5867. July 8, 1930. Along the railroad about 1 mile from Chinchon, Manchuria. Plant has white flowers, light-green foliage, and light straw-colored seed.

88967 to 89015—Continued.

88992. No. 5868. July 8, 1930. Along a roadside about 1 mile from Chinchon, Manchuria. Mixed seed of the white-flowered and purple-flowered forms or strains of this grass. It grows in sandy soil and is used for binding railroad embankments.

88993. No. 5869. July 8, 1930. From a bank along the beach near Makaton, Manchuria. Seed from a white-flowered, light-green foliage strain that occurs quite abundantly in this section.

88994. No. 5870. July 8, 1930. From plants along the bank of a beach near Makaton, Manchuria. Seed from white and purple-flowered strains of this species.

88995. No. 6003. July 14, 1930. Along roadside near Shia Chiahotzu, Manchuria. Light straw-colored seed, light-green foliage, and white flowers. Used for binding railroad embankments and for lawns.

88996. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 5921. July 21, 1930. From a warehouse in the South Manchurian Railway storage yards, Dairen. Medium-sized, light-green beans; used for bean sprouts and for making bean vermicelli.

88997 to 89015. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 88997 to 89014 are from a warehouse in the South Manchurian Railway storage yards, Dairen, July 12, 1930. Medium-sized, mixed yellow varieties; used for oil and oil meal.

88997. No. 5874.

88998. No. 5943.

88999. No. 5944.

89000. No. 5945.

89001. No. 5946.

89002. No. 5947.

89003. No. 5948.

89004. No. 5949.

89005. No. 5950.

89006. No. 5951.

89007. No. 5952.

89008. No. 5953.

89009. No. 5954.

89010. No. 5955.

89011. No. 5956.

89012. No. 5957.

89013. No. 5958.

89014. No. 5959.

89015. No. 6001. July 14, 1930. From Impukujoshi. Medium sized, oval, greenish yellow with slate-black hilum; germ yellow. This variety is generally grown in this section, as it succeeds better in the rainy season than the yellow-seeded varieties.

89016. STIZOLOBIUM PRURITUM (Wight) Piper and Tracy. Fabaceae. **Velvetbean.**

From Southern Rhodesia, Africa. Seeds presented by J. M. Moubray, Chipoli, Shamva. Received August 25, 1930.

Fungwi bean. While the plants resemble the Florida velvetbean very closely, they are not suitable for forage, owing to the trouble caused by the stinging hairs. Of possible value for green manure.

For previous introduction see No. 34439.

89017 to 89020. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Pasar Minggoe, Java. Plants presented by M. M. Magielse, Government horticulturist, Tuinbouwkundig Ambtenaar, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received August 26, 1930.

89017. *Mangga aroemanis* (grafted on *madoe*). In Java this is a medium-sized mango of bluish green color. The fruit is of fine flavor, has no fiber, is not injured by the winds, and is an excellent shipper. It is considered the best mango in Java.

For previous introduction see No. 81684.

89018. *Mangga golek* (grafted on *madoe*). A large, thin, very long, golden yellow, very sweet, and juicy mango with few fibers. It is a good bearer, on clay soil with stiff subsoil, but not quite as good a bearer as the Saigon.

For previous introduction see No. 81683.

89019. *Mangga kopjor.* A very fibrous bright yellow seedling mango which is used as a stock in eastern Java, where they have severe droughts and the soil is alkaline and not suited to the growth of ordinary mangoes.

For previous introduction see No. 81682.

89020. *Mangga nanas.* A seedling.

89021 to 89025. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Santiago, Chile. Seeds presented by Alberto J. Wiedmaier, Director de la Estacion Experimental, Santiago. Received August 26, 1930.

89021. *Colina.*

89022. *Combarbala.*

89023. *Las Condes.*

89024. *Llolleo.*

89025. *Patagonia.*

89026 and 89027.

From Peradeniya, Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Gardens, Department of Agriculture. Received August 26, 1930.

89026. CARYOPHYLLUS AROMATICUS L. (*Eugenia aromatica* Kuntze). Myrtaceae. **Clovetree.**

A small tree, 12 to 15 feet high, native in the Molukka Islands, now cultivated widely in tropical regions for the dried unopened flower buds which constitute the cloves of commerce.

For previous introduction see No. 31776.

89027. CARYOPHYLLUS MALACCENSIS (L.) Stokes. Myrtaceae. **Ohia.**

When in flower, the branches of this tree are gorgeous, covered as they are with large masses of flowers an inch or so across, filled with hundreds of beautiful deep rose-pink or crimson stamens. The fruit is much esteemed for preserves made from it, which seem to have a characteristic flavor of some merit.

For previous introduction see No. 57820.

89028. CITRUS NOBILIS Lour. Rutaceae.

From India. Seeds presented by Sir James R. Roberts, through R. Y. Jarvis, American consul, Calcutta. Received August 29, 1930.

Udaipur. A large, sweet, loose-skinned orange.

89029. BAMBUSA LONGISPICULATA Gamble. Poaceae. **Bamboo.**

From Dehra Dun, India. Seeds presented by R. N. Parker, Forest Botanist, Forest Research Institute, New Forest. Received August 28, 1930.

This species appears to differ from *Bambusa tulda* only in the larger spikelets.

For previous introduction see No. 81495.

89030. SORGHUM ARUNDINACEUM (Willd.) Stapf. Poaceae. **Grass.**

From Belgian Congo. Seeds presented by Dr. A. Bracke, Casteau, Belgium. Received August 29, 1930.

This is closely related to Sudan grass. In its natural habitat it grows on heavy black fertile lands and is apparently perennial. It does not spread by underground roots, but volunteers very freely from seed, especially where the land has been cultivated. The stems are somewhat woodier and more canelike than those of Sudan grass.

For previous introduction see No. 56801.

89031 to 89033. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From Manila, Philippine Islands. Seeds presented by Aniano Elayda, Assistant Horticulturist, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received August 30, 1930.

Varieties to be used in our breeding work for resistance to melon diseases.

89031. *De Jaspi.* From Baliwag, Bulacan.

89032. *Long Native.* From San Isidro, North Esija.

89033. *Valencia.* From San Miquel, Bulacan.

89034 to 89036.

From Java. Seeds presented by the director, Botanic Gardens, Buitenzorg. Received September 3, 1930.

89034 to 89036—Continued.

89034. CASSIA MOSCHATA H. B. K. Caesalpiniaceae.

A medium-sized tropical South American tree with leaves composed of 14 to 18 pairs of leaflets and yellow flowers in axillary racemes.

For previous introduction see No. 72431.

89035. SYZYGIUM ACUMINATISSIMUM (Blume) DC. (*Eugenia acuminatissima* Kurz). Myrtaceae.

A large evergreen tree up to 80 feet high with thinly coriaceous elliptic-lanceolate leaves about 4 inches long, compound panicles of small white flowers, and blackish purple fruits nearly an inch in diameter. It is native to Burma, the Malay Peninsula, and Sumatra.

89036. SYZYGIUM CYMOSUM (Lam.) DC. Myrtaceae.

An erect tree with brown branchlets, somewhat coriaceous oblong sharp-pointed leaves 2 to 4 inches long, small cymes of inconspicuous flowers, and globose fruits 1 inch in diameter. It is native to the island of Mauritius.

89037 and 89038.

From Morocco. Seeds presented by Parker W. Buhrman, American consul, Casablanca. Received September 3, 1930.

89037. GENISTA MONOSPERMA (L.) Lam. Fabaceae. **Bridal-veil broom.**

An ornamental leguminous shrub, native to Spain, about 10 feet high, with slender grayish branches and small very narrow leaves. The fragrant white flowers are in short lateral racemes.

For previous introduction see No. 78902.

89038. POLYCARPAEA NIVEA (Ait.) Webb. Silenaceae.

A low-growing gray hairy perennial plant, used extensively and successfully in the sand-binding experiments on the sand dunes.

For previous introduction see No. 71862.

89039 to 89075.

From Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received September 4, 1930.

89039 and 89040. ASPARAGUS sp. Convallariaceae.

89039. ASPARAGUS sp.

No. 6002. July 14, 1930. Near Impukujoshi, from plants along the roadside. This species grows quite abundantly along the roadsides and hillsides. It is from 2 to over 3 feet high and apparently is a different species from No. 5872 (89040).

89040. ASPARGUS sp.

No. 5872. July 11, 1930. From wild plants on the mountain south of Dairen. This species grows quite abundantly on the mountains, and the plants range from 15 to 30 inches high.

89039 to 89075—Continued.

89041 to 89047. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

Probably introduced from Russia during their occupation of this section.

89041. No. 6047. July 31, 1930. From plants along the roadside about 1 mile west of Hsimgyaocheng. Plants erect, with flowers ranging from light blue to deep pinkish blue.

89042. No. 6044. July 26, 1930. From plants along the hillside near the seashore, Hoshinoya. The plants vary in habit of growth from procumbent to nearly erect. Flowers vary from very light blue to deep purple. Some plants have smoky yellow flowers.

89043. No. 6045. July 29, 1930. From plants along the roadside about 1 mile southwest of Hsimgyaocheng. Plants erect, flowers varying from light blue to deep pinkish blue. Grows quite abundantly and seeds very heavily.

89044. No. 6042. July 26, 1930. From plants along a hillside near the seashore, Hoshinoya. Plants erect, 24 to 30 inches high, with blue flowers.

89045. No. 6043. July 26, 1930. From plants growing on the side of cliff near the seashore at Hoshinoya. Plants erect, 24 to 30 inches high, with pale-blue flowers.

89046. No. 6033. July 17, 1930. From a single plant along the road of the north wall of Chinchon. Plant erect with light-blue flowers.

89047. No. 6041. July 26, 1930. From plant along a roadside on a hillside near Port Arthur. Plant erect, 26 to 36 inches high, with pale-blue flowers.

89048 and 89049. MELILOTUS SUAVEOLENS Ledeb. Fabaceae. **Sweetclover.**

89048. No. 6040. July 26, 1930. Collected along the roadside on the mountain near Port Arthur. Plants 30 to 36 inches high, with yellow flowers. Growth starts rather early in the spring.

89049. No. 6046. July 31, 1930. From plants along the roadside north of Hsimgyaocheng. Plants 24 to 36 inches high, with yellow flowers.

89050. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 6074. August 2, 1930. From a warehouse in the South Manchurian Railway storage yards at Dairen. A medium-sized, light-green bean with white hilum. Used for bean vermicelli and bean sprouts.

89051. RUBUS sp. Rosaceae.

No. 6034. July 24, 1930. From plants in a mounfain valley about 2 miles northwest of Koneisen. Fruits orange red and rather sweet; the leaves of the plant are white underneath.

89052 to 89075. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From a warehouse in the South Manchurian Railway storage yards, Dairen, August 2, 1930. A collection of medium-sized mixed yellow varieties used for oil and oil meal.

89039 to 89075—Continued.

89052. No. 6072.

89053. No. 6069. Medium small to medium sized.

89054. No. 6050. This variety is exported to Europe.

89055. No. 6051.

89056. No. 6065.

89057. No. 6062.

89058. No. 6054.

89059. No. 6063.

89060. No. 6070.

89061. No. 6053. This variety is exported to Europe.

89062. No. 6064.

89063. No. 6052. A variety with light-brown hilum.

89064. No. 6055. A variety used for soy sauce, miso, and bean curd.

89065. No. 6073.

89066. No. 6058.

89067. No. 6067. Exported to Europe.

89068. No. 6068.

89069. No. 6071.

89070. No. 6067.

89071. No. 6056. A nearly round variety with a light-brown hilum.

89072. No. 6059.

89073. No. 6066. Exported to Japan for making miso, soy sauce, and bean curd.

89074. No. 6061.

89075. No. 6060.

89076. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Tehran, Perisa. Seeds purchased through Charles A. Hoffman, American College of Tehran. Received September 9, 1930.

Collected at Damghan, Persia, by M. Ziai, a Persian student at the American College, Tehran. Damghan is one of Persia's fruit-growing centers and has a reputation for producing high-quality pistache nuts. The orchards consist of seedling trees, some of which have been top-worked with scions from favorite trees. Although trees do not vary much in size, some produce larger nuts than others.

89077. EHRHARTA VILLOSA MAXIMA Stapf. Poaceae. **Pyp grass.**

From Australia. Roots presented by W. J. Spafford, Deputy Director of Agriculture, through J. F. Bailey, Director, Botanic Garden, Adelaide. Received September 9, 1930.

A form of *E. villosa* with stouter stems and larger and more compound panicles. The typical form is a perennial grass ascending from a decumbent and rooting base, the smooth stems finally becoming about 3 feet long. The linear leaves are 2 to 3 inches long, and the erect, linear, nearly secund panicles are 3 to 4 inches long. It is native to South Africa and has been used as a sand binder.

89078. HEVEA BRASILIENSIS (H. B. K.) Muell. Arg. Euphorbiaceae. **Para rubbertree.**

From Sumatra. Seeds from plantations of the United States Rubber Co., East Indies, presented by Ernest Hopkinson, vice president, Akron, Ohio. Received September 11, 1930.

A tropical Brazilian tree extensively cultivated for rubber.

For previous introduction see No. 77394.

89079. VIGNA VEXILLATA (L.) Rich. Fabaceae.

From Mangalore, India. Seeds received through Roland McKee, Bureau of Plant Industry. Received September 11, 1930.

A tropical vine with trifoliolate leaves of ovate-oblong pointed leaflets and usually 2-flowered peduncles bearing small yellow flowers. Of possible value as a cover crop.

89080. TRICHILIA CHIRINDENSIS Swynn. and Baker. Meliaceae.

From Southern Rhodesia, Africa. Seeds presented by W. L. Thompson, Mount Silinda. Received March 9, 1930. Numbered in September, 1930.

Umkuhla, also called *white mahogany.* The tree has a spreading head of dark glossy leaves, light-gray bark, and dull-white flowers; it makes an excellent shade tree, sometimes becoming 120 feet in height. The timber is reddish brown and easily worked. The seeds are partially covered with a white pulp, inclosed by a bright-red skin. This pulp has a nutty flavor and, although there is very little of it on each seed, the natives are very fond of it. An oil is also obtained from the seeds which may become solid, but when melted it does not solidify at once upon cooling.

For previous introduction see No. 54922.

89081. ANTIDESMA BUNIUS (L.) Spreng. Euphorbiaceae. **Banauac.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received September 11, 1930.

A small, attractive, dioecious tree, attaining a height of 30 feet, with dark-green thick-pointed leaves and small, dark-red, subacid, well-flavored fruits in racemes like the currant. May be eaten raw or made into a fair jelly. Widely distributed at low and medium altitudes under varying climatic conditions.

For previous introduction see No. 65791.

89082. PAEONIA CORALLINA Retz. Ranunculaceae. **Coral peony.**

From Cyprus. Seeds presented by C. B. Ussher, Horticulturist, Office of the Director of Agriculture, through David Fairchild, Bureau of Plant Industry. Received September 11, 1930.

From Prodromos. A tall wild peony with carrotlike roots and purple flowers, rarely whitish or yellowish. Native to southern Europe.

For previous introduction see No. 67048.

89083 and 89084.

From Mexico. Seeds collected by Paul Russell and Max Souviron, agricultural explorers, Bureau of Plant Industry. Received September 12, 1930.

89083. MAMMILLARIA sp. Cactaceae. **Cactus.**

No. 2. Near Tizapan, Distrito Federal, September 3, 1930. Rather frequent in rocky places in the Distrito Federal. A medium-sized globular cactus with stout recurved spines. Fruits dark red; flowers not seen.

89084. SYMPHORICARPUS MICROPHYLLUS H. B. K. Caprifoliaceae. **Pink snowberry.**

No. 1. From Rio Frio, Distrito Federal, August 27, 1930. A bush 3 to 6 feet high, with attractive pinkish flowers and white translucent fruits. Collected at 8,700 feet altitude in open mixed woods.

89085 to 89099. CYCLAMEN spp. Primulaceae.

From the Netherlands. Corms purchased from C. G. Van Tubergen (Ltd.), Zwanenburg Nurseries, Haarlem. Received September 12, 1930.

89085 to 89087. CYCLAMEN ATKINSII T. Moore.

A hybrid between *Cyclamen coum* and *C. ibericum*. The leaves are reniform and dark green, spotted white, and the pale-rose or white flowers are usually lined or spotted red.

For previous introduction see No. 79178.

89085. Variety *album*.

89086. Variety *roseum*.

89087. Variety *rubrum*.

89088. CYCLAMEN CILICICUM Boiss. and Heldr.

A tuberous-rooted perennial with long-stemmed oval heart-shaped leaves, dark green and white mottled above. The flowers, white and rose colored, are about three-fourths of an inch long. The plant is native to the Balearic Islands.

For previous introduction see No. 79188.

89089 to 89091. CYCLAMEN COUM Mill.

A spring-blooming tuberous-rooted plant, native from southeastern Europe to Persia, about 6 inches high, with rounded-reniform uniformly green leaves and small scentless purple flowers.

For previous introduction see No. 79191.

89089. Typical form.

89090. Variety *album*.

89091. Variety *roseum*.

89092. CYCLAMEN EUROPAEUM L. **European cyclamen.**

A low more or less evergreen European perennial with a tuberous root, rounded or kidney-shaped leaves, white marbled above and purplish beneath, and fragrant bright-red flowers on scapes 4 to 5 inches high in autumn.

For previous introduction see No. 79192.

89085 to 89099—Continued.

89093. CYCLAMEN IBERICUM Stev.

A dwarf herbaceous perennial, native to the Caucasus region, with oval-rounded leaves zoned with white above and purple flowers with darker-colored throats.

For previous introduction see No. 79196.

89094. CYCLAMEN LIBANOTICUM Hildebr.

A cyclamen with obcordate, sinuate-margined leaves marked with white above and deep violet beneath, appearing in autumn. The lobes of the rose-colored corolla are eared at the base and have a T-shaped, deep-red mark. It is native to Palestine.

89095 and 89096. CYCLAMEN NEAPOLITANUM Tenore. **Neapolitan cyclamen.**

A low perennial 3 inches high, arising from a large black tuber. The deep pink or rarely white flowers are borne in the autumn. Native to Italy.

For previous introduction see No. 79055.

89095. Typical form.

89096. Variety *album*.

89097. CYCLAMEN PSEUDO-IBERICUM Hildebr.

A spring-flowering cyclamen with obcordate cartilaginous crenulate margined leaves spotted silvery white on deep green and violet flowers spotted with darker color and white at the base. It is said to be native to Asia Minor.

89098 and 89099. CYCLAMEN REPANDUM Sibth. and Smith. **Spring cyclamen.**

A spring-flowering tuberous-rooted plant with cordate-undulate lobed leaves and showy purple flowers. Native to the Mediterranean countries.

For previous introduction see No. 79198.

89098. Typical form.

89099. Variety *album*.

89100. PRUNUS CAPULI Cav. Amygdalaceae. **Capulin.**

A seedling growing at the Plant Introduction Garden, Chico, Calif., from seed collected in January, 1921, by Wilson Popenoe, agricultural explorer, at Ambato, Ecuador, and originally numbered 52579.

The fruits are from one-half to five-eighths of an inch in diameter and black when fully ripe. The pit is of medium size, leaving a fair thickness of flesh of good texture and fair flavor. There is a trace of bitterness present and a lack of acid, but for a fruit of the general type of the wild black cherry, *Prunus serotina*, to which the capulin is closely allied, this may be considered good.

89101 to 89172.

From China, Chosen, and Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received September 12, 1930.

89101. ASPARAGUS sp. Convallariaceae.

No. 5576. August 3, 1930. Peiping, China. Small plants about 10 inches in

89101 to 89172—Continued.

height, growing on top of the Tartar wall about the city.

89102 to 89105. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

89102. No. 5535. July 27, 1930. From Peiping, China. *Huang hsi kwa* (yellow watermelon.) Rind golden yellow about one-half inch thick, flesh salmon pink to light red, with rather yellowish-green fiber, juicy, sweet, flavor not especially good. It came from Paoteng Fu originally.

89103. No. 5536. July 29, 1930. From the east market, Peiping. *Hei peng chin hsi kwa* (black-skin melon). Melon 12 inches long, about 9 inches in diameter, rind very dark green, flesh deep-golden yellow, juice sweet and of excellent quality; seeds reddish brown.

89104. No. 5537. July 29, 1930. From the east market, Peiping. *Liang hua tzu hsi kwa* (bright strip melon). A melon 12 inches long and over 9 inches in diameter; rind deep green and whitish green; flesh bright red, very juicy, sweet, not very high in quality, red to within one-half inch of the rind; seeds black.

89105. No. 5538. July 29, 1930. From the east market, Peiping. *Chen tou kwa* (pillow watermelon). Melon 16 inches long and over 7 inches in diameter, with light-green rind; originally from Te Chou, Shantung Province. Flesh light yellow, which extends within three-fourths of an inch to the rind, juice sweet, but not as good in quality as No. 5536 (89103); seeds reddish brown.

89106 to 89110. LESPEDEZA spp. Fabaceae. **Bushclover.**

89106. LESPEDEZA sp.

No. 5541. July 30, 1930. From the Temple of Heaven, Peiping. The plant stems are sometimes over 3 feet long and flower practically throughout the entire length; flower small, white or nearly so.

89107. LESPEDEZA sp.

No. 5579. August 5, 1930. In the vicinity of the Summer Palace, Peiping.

89108. LESPEDEZA sp.

No. 5592. August 7, 1930. From Pa Ta Chu, Western Hills, China; decumbent plants along the mountain side.

89109. LESPEDEZA sp.

No. 6096. August 7, 1930. From Mount Oshozen, about 4 miles north of Chinchon, Manchuria. Seed borne in buttonlike clusters along the stems.

89110. LESPEDEZA sp.

No. 6097. August 7, 1930. From Mount Oshozen, about 4 miles north of Chinchon, Manchuria. Plants 24 to 30 inches high and growing on very poor soil.

89111 to 89121. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

89101 to 89172—Continued.

89111. No. 5540. July 30, 1930. From the Temple of Heaven, Peiping. Leaves small, flowers deep purple, plants generally strong growers.

89112. No. 5545. July 30, 1930. From the court of the Imperial World Building, Temple of Heaven, Peiping.

89113. No. 5547. July 30, 1930. From the court of the Imperial World Building, Temple of Heaven, Peiping.

89114. No. 5548. July 30, 1930. In the vicinity of the Temple of Heaven, Peiping. Leaves rather narrow, flowers deep purple.

89115. No. 5553. July 30, 1930. Collected in the vicinity of the Temple of Heaven, Peiping.

89116. No. 5554. August 1, 1930. Collected along the railway, about 500 yards south of the station at Feng Tai, China.

89117. No. 5555. August 1, 1930. Collected along the road, about 500 yards south of the station at Feng Tai, China.

89118. No. 5572. August 2, 1930. Collected in the vicinity of the Winter Palace, Peiping. Plants 2 feet high and flowers deep purple.

89119. No. 5573. August 2, 1930. From the mulberry garden of the Winter Palace, Peiping. Plants with stems up to 6 feet high, dark purple flowers, and seeding very heavily.

89120. No. 5574. August 3, 1930. Collected in the vicinity of the Winter Palace, Peiping. Plants over 30 inches high, with dark-purple or lighter colored flowers.

89121. No. 6100. August 8, 1930. Collected along the mountain side about 1 mile south of Dairen, Manchuria. Plants from 30 to 40 inches high, with light-blue to pinkish-purple flowers. The plants vary in habit.

89122. MELILOTUS SUAVEOLENS Ledeb. Fabaceae. **Sweetclover.**

No. 5591. August 5, 1930. Collected in the vicinity of the Summer Palace, Peiping. Plants of the yellow-flowered variety, growing abundantly.

89123. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

No. 6095. August 7, 1930. Collected along the side of Mount Oshozen, about 4 miles north of Chinchon, Manchuria. This is a hardy grass which forms a tough sod and is used for embankments, lawns, and golf fairways.

89124. SOPHORA FLAVESCENS Ait. Fabaceae.

No. 5551. July 30, 1930. From the grounds of the Temple of Heaven, Peiping. A subshrubby perennial, 3 to 4 feet high, with odd-pinnate leaves of three to six pairs of elliptical leaflets 1 to 2 inches long, and loose racemes of creamy white pea-shaped flowers 1-inch long. It is native to northern China.

89125. INCARVILLEA SINENSIS Lam. Bignoniaceae.

No. 5575. August 3, 1930. Collected in the vicinity of Peiping. Plants 1 to

89101 to 89172—Continued.

2 feet high with finely cut foliage and light-pink flowers.

For previous introduction see No. 75983.

89126. BOEA sp. Gesneriaceae.

No. 7032. August 10, 1930. Collected on the mountain side near Pao Chu Tung Temple, China. A plant with rounded leaves in a whorl and a delicate violet-colored flower. This may make a good rockery plant in damp situations.

89127 to 89172. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

Nos. 89127 to 89166 are from the Kankyo Hokudo Prefecture Seed and Nursery Farm, Kyojyo, Chosen, August 8, 1930.

89127. No. 6107. *Oiarukon.* Large, oval, light yellow with pale hilum; used for food purposes.

89128. No. 6108. *Tsurunoko.* Large, very light yellow with pale hilum; used largely for confectionery purposes.

89129. No. 6109. *Shiromeshoryu* (small white eye). Medium small, oval with pale hilum; used for food.

89130. No. 6110. *Muyonzon.* Medium large, oval, yellow, with pale hilum which has a cloudy brown spot at one end; used for food.

89131. No. 6111. *Kankouta.* Medium sized, oval, light, cloudy yellow, with hilum varying from light to dark brown.

89132. No. 6112. *Onzonkon.* Medium sized, nearly round, light yellow with hilum varying from pale to brown.

89133. No. 6113. *Saichou.* Medium large, oval, yellow, with pale hilum; used for food.

89134. No. 6114. *Mentou.* Medium large, oval, yellow with a pale hilum which has a brown spot at one end; used for food.

89135. No. 6115. *Shimokushoryu* (small blue eye). Medium sized, oval, yellow with reddish-brown hilum; used for food.

89136. No. 6116. *Kuroshoryu* (small black). Small, round, black, yellow germ; used for sprouting.

89137. No. 6117. *Geta.* Medium sized, light cloudy yellow, oval, hilum varies from light to dark brown; used for food and for cattle feed.

89138. No. 6118. *Zontanorukon.* Medium small, slightly flattened, oval, cloudy yellow, hilums vary from brown to black; used for cattle feed.

89139. No. 6119. *Chietsutatsuuri.* Medium sized, oval, very light yellow with pale hilum.

89140. No. 6120. *Senbizebi.* Medium sized, oval, yellow, and brown with brown saddle; used for cattle feed.

89141. No. 6121. *Chiarukon.* Medium sized, oval, yellow, with reddish-brown hilum; used for food.

89101 to 89172—Continued.

89142. No. 6122. *Purukon.* Medium large, oblong, slightly flattened, light bluish green with slate-black hilum; used for cattle feed.

89143. No. 6123. *Kuromeshoryu* (small black eye). Medium small, nearly round, yellow with black hilum.

89144. No. 6124. *Nunkamuzankon.* Medium small, oval, yellow with reddish-brown hilum.

89145. No. 6125. *Kirukumukon.* Small, flat black, yellow germ; very much like the *Peking* variety.

89146. No. 6126. *Churyokurota.* Medium sized, oval, dull black, yellow germ; used for confections.

89147. No. 6127. *Munnurekon.* Medium sized, oval, bluish green, yellow germ.

89148. No. 6128. *Akata* (red). Small, round, cinnamon brown, and used for sprouts. Very similar to *Brownie* (17256).

89149. No. 6129. *Rigenta.* Medium sized, oval, yellow with reddish-brown hilum; used for food.

89150. No. 6130. *Takuchikon* (black pod). Medium sized, oval, yellow with light to reddish-brown hilum.

89151. No. 6131. *Betsujota.* Large, oval, bright yellow with pale hilum; used for food.

89152. No. 6132. *Hakuchuta.* Medium sized, oval, glossy yellow with pale hilum; used for food.

89153. No. 6133. *Wasenakuta* (white). Medium sized, oval, light yellow with pale hilum. Brown spot on one end of hilum.

89154. No. 6134. *Chirumukon* (oil bean). Medium small, nearly round, glossy yellow with black hilum.

89155. No. 6135. *Kirukumukon* (small green). Medium small, oval, greenish yellow, slightly flattened with very light-brown hilum; germ yellow.

89156. No. 6136. *Chonkon.* Medium sized, oval, light smoky yellow, with the hilum varying from pale to dark brown; used for cattle feed.

89157. No. 6137. *Kokuta* (black bean). Large, oval, dull black with yellow germ; used in making confections.

89158. No. 6138. *Usuao* (light green). Medium sized, oval, light green with pale hilum; germ yellow.

89159. No. 6139. *Zanikon.* Medium sized, oval, black bean marked with brown concentric rings; very much like *Meyer* (17852).

89160. No. 6140. *Shimohakuta* (white). Medium sized, oval, light yellow with dark-brown hilum.

89161. No. 6141. *Kankoutari.* Medium sized, oval, light green with pale hilum.

89162. No. 6142. *Hawante.* Medium large, oval, light yellow with pale hilum; used for food.

89163. No. 6143. *Mehakuta.* Medium sized, oval, light glossy yellow with very pale-brown hilum; used for food.

89101 to 89172—Continued.

89164. No. 6144. *Tatsuchi.* Medium sized, oval, light cloudy yellow with pale hilum.

89165. No. 6145. *Otaikon.* Medium large, oval, yellow, with pale hilum; used for food.

89166. No. 6146. *Takuchikamuzankon.* Medium small, oval, yellow, with reddish-brown hilum.

89167 and 89168. August 11, 1930. From a wharf warehouse at Dairen, Manchuria. Mixed yellow varieties used for oil and oil meal.

89167. No. 6155. **89168.** No. 6156.

89169. No. 6147. *Shoukokuta.* August 8, 1930. From the Kankyo Hokudo Prefecture Seed and Nursery Farm, Kyojyo. Very small, round, black with green germ. Appears identical with *Kingston* (17255); used for sprouting.

89170 and 89171. August 11, 1930. From a wharf warehouse at Dairen. Mixture of yellow-seeded varieties used for oil and oil meal.

89170. No. 6157. **89171.** No. 6158.

89172. No. 7009. From Hsiang Chi Ssu Temple. A rather small, creamy yellow bean with a rather pronounced light-brown hilum.

89173. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Australia. Cuttings presented by the Hawaii Experiment Station, through E. W. Brandes, Bureau of Plant Industry. Received September 13, 1930.

Oramboa H. A. 409.

89174. COLPOTHRINAX WRIGHTII Griseb. and Wendl. Phoenicaceae. **Palm.**

From Herradura, Cuba. Seeds presented by Mrs. F. S. Earle. Received September 15, 1930.

Barrigona. A fan palm with a trunk up to 40 feet high having a bottle-shaped base. It is native to Cuba.

89175. IRIS KOREANA Nakai. Iridaceae.

From Japan. Seeds purchased from K. Yashiroda (Ltd.), Tonosho-Kyoku, Kagawaken. Received September 15, 1930.

An iris with a creeping rhizome from which arise sword-shaped leaves about a foot long and stalks bearing golden-yellow flowers. The inner petals are elliptic and emarginate, and the outer petals are obovate. It is native to Chosen.

89176 to 89178.

From Mexico. Plants collected by Paul Russell and Max Souviron, agricultural explorers, Bureau of Plant Industry. Received in September, 1930.

89176. (Undetermined.)

No. 3. A low succulent with tuberous roots; grows in rocky places near Tizapan, Distrito Federal.

89177. COTYLEDON sp. Crassulaceae.

No. 4. Conchas. September 5, 1930, near Conviento del Desierto, Districto Federal. Plant forming rosettes on rocky bluff just above the Conviento del Desierto, about 9,000 feet altitude.

89176 to 89178—Continued.

Snow is said to fall here every winter, hence this plant is more or less hardy.

89178. ALTAMIRANOA sp. Crassulaceae.

No. 5. September 9, 1930, Cerro de Estrella, Distrito Federal. Growing on rocks at the summit of Cerro de Estrella, about 7,800 feet altitude. Flowers are white.

89179. LILIUM MARTAGON L. Liliaceae. **Martagon lily.**

From England. Seeds purchased from Rev. J. Farnworth Anderson, Glenn Hall Rockery, Great Glen, Leicester. Received September 19, 1930.

Farrer's variety.

89180. SOLANUM SANITWONGSEI Craib. Solanaceae.

From Bangkok, Siam. Seeds presented by Phya Ahar Pariraks, Director of Agriculture, Department of Agriculture, Ministry of Lands and Agriculture. Received September 22, 1930.

Mawaeng-ton. A Siamese shrub about 3 feet high, with small racemes of bluish flowers and orange-colored fruits. It is said to be of value in the treatment of diabetes.

For previous introduction see No. 77618.

89181. GARCINIA sp. Clusiaceae.

From Indo-China. Seeds presented by M. Poilane, Jarden Botanique and Zoologique de Saigon. Received September 22 1930.

Tree 30 feet high and 3 feet in circumference, having yellow edible fruits; may be used as a stock for grafting mangosteens (*Garcinia mangostana*).

89182 and 89183. ZEA MAYS L. Poaceae. **Corn.**

From Guatemala City, Guatemala. Seeds presented by the Minister of Agriculture, through Sheldon Whitehouse, American minister. Received September 23, 1930.

89182. Black. **89183.** Red.

89184. CAJANUS INDICUS Spreng. Fabaceae. **Pigeon pea.**

From Hawaii. Seeds presented by F. S. Krauss, University of Hawaii, Honolulu, through O. W. Barrett. Received September 25, 1930.

A Hawaiian variety with brownish black seeds, selected from the progeny of a collection originally received from Porto Rico.

89185 and 89186. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Barbados, British West Indies. Cuttings presented by the director, Department of Science and Agriculture. Received September 30, 1930.

89185. B. 726. **89186.** B. 891.

89187 to 89197. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Australia. Seeds presented by H. Wenholz, Director of Plant Breeding,

89187 to 89197—Continued.

Department of Agriculture, Sydney, New South Wales. Received September 18, 1930.

Varieties grown at Glen Innes, New South Wales.

89187. *Anchor.*

89188. *Barwang.*

89189. *Bombard.*

89190. *Burrill.*

89191. *Cleveland.*

89192. *Ford.*

89193. *Lawson.*

89194. *Linden.*

89195. *Marchief.*

89196. *Nabawa.*

89197. *Warren.*

89198 to 89202. GOSSYPIUM spp. Malvaceae. **Cotton.**

From India. Seeds received through the Plant Quarantine and Control Administration, San Francisco, Calif. Received September 26, 1930.

89198 and 89199. GOSSYPIUM NANKING Meyen.

89198. Variety *Mallisoni* (N. T. 15/29). White flower.

89199. (N. T. 17/29.) Yellow flower.

89200 and 89201. GOSSYPIUM NEGLECTUM Todaro.

89200. (N. T. 8/29.) Yellow flower.

89201. Variety *Rosea* (N. T. 10/29). White flower.

89202. GOSSYPIUM SANGUINEUM Hassk.

(N. T. 12/29.) Broad-lobed, pink flower.

89203. HETEROSPATHE ELATA Scheff. Phoenicaceae. **Sagisi palm.**

89203—Continued.

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received September 26, 1930.

A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations and where the rainfall is evenly distributed. It is a most attractive and graceful palm and will make a good plant for the conservatory and possibly a good house palm.

For previous introduction see No. 64595.

89204 to 89208. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Scotland. Tubers presented by Donald McKelvie, Newlanark, Lambash, Arran Island. Received April 14, 1930. Numbered in September, 1930.

McKelvie seedlings.

89204. A. 415.

89205. A. 581.

89206. A. 592.

89207. A. 596.

89208. 675.

89209 and 89210.

From Java. Seeds presented through the Tuinbouwkundig, Ambtenaar, Pasarminggoe. Received March 19, 1930. Numbered in September, 1930.

89209. ARTOCARPUS CHAMPEDEN (Lour.) Spreng. (*A. polyphema* Pers.). Moraceae.

A handsome East Indian shade tree bearing small elongated fruits which are rather smooth-skinned. The aril has a peculiar sweet flavor.

For previous introduction see No. 78574.

89210. ARTOCARPUS INTEGRA (Thunb.) L. Moraceae. **Jackfruit.**

Variety *nangka.* A tree that begins to fruit when 5 to 6 years of age. The unripe fruits and young leaves are used as greens, and the mature fruits are eaten as dessert fruits.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 105

Washington, D. C. ▼ Issued October, 1932

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1930 (Nos. 89211–90836)

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INTRODUCTORY STATEMENT

The present inventory (Nos. 89211–90836) for the period from October 1 to December 31, 1930, records the arrival of material from several explorers and collaborators in the field.

From Dr. G. Weidman Groff, Lingnan University, Canton, China, was received a fine collection of subtropical fruits, including species of atalantia, citrus, claucena, dipterocarpus, litchi, and mangifera, chiefly for use of experts in the Federal department.

From H. L. Westover, who was traveling in Spain and Portugal at the time in search of particular strains of forage crops, were received various introductions, principally alfalfa (*Medicago sativa*), beans, melilotus, and trigonella, intended primarily for use in the Division of Forage Crops and Diseases.

From Dr. Donald Reddick, pathologist, Cornell University, and Paul Russell and Max Souviron of this division, were sent in from Mexico over 100 specimens of seeds and tubers of various wild-potato species to be used in potato breeding, as well as minor collections of other native plants.

From P. H. Dorsett and W. J. Morse, who have been in the Orient for several years, were received large collections of forage crops and food plants, principally lespedeza, melilotus, astragalus, phaseolus, vigna, and soybeans, of which they forwarded over 130 numbers. They sent as well seed of various ornamentals, chiefly seed of deciduous trees for testing in this country, possibly in the Great Plains area.

And finally, there were received from Knowles A. Ryerson, from Tunisia, Africa, seeds of *Pistacia vera* (Nos. 89679–89684) and of the hybrid *P. terebinthus* × *vera* (No. 90049) from Chios Island, Greece, to be used in furthering the pistache studies already undertaken in the West and Southwest.

The inventory also records various shipments for other workers—a collection of hebes (shrubby veronicas) purchased from New Zealand; an extensive collection of bromeliads from a specialist in France, for growth and testing in southern Florida; additional shipments of herbaceous perennials from European nurserymen; and a collection of seeds of various ornamentals from the director of the Botanic Garden, Tiflis, Union of Soviet Socialist Republics, which were requested so as to study their suitability for gardens in the more southern States.

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The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., February 29, 1932.

INVENTORY[1]

89211. GENISTA AETNENSIS (Bivona) DC. Fabaceae. **Aetna broom.**

From Sicily, Italy. Seeds presented by Giardino Allegra, Catania. Received October 1, 1930.

An attractive shrub, 6 feet or less in height, with nearly leafless, slender branches and fragrant yellow flowers in loose terminal racemes. Native to Sicily and Sardinia.

For previous introduction see 88686.

89212 to 89214.

From Brazil. Seeds presented by Dr. A. Bittencourt, in charge, Estacão Experimental de Agrostologia, through P. H. Rolfs, Viçosa, Minas Geraes. Received October 1, 1930.

89212. MEIBOMIA BARBATA (L.) Kuntze (*Desmodium barbatum* Benth.). Fabaceae.

A stout erect suffrutescent perennial with trifoliolate leaves of elliptical to obovate leaflets and crowded corymbs of light-blue to purple flowers. Cultivated in Brazil for green forage and hay.

89213. MEIBOMIA DISCOLOR (Vogel) Kuntze (*Desmodium discolor* Vogel). Fabaceae.

A shrubby, erect, hairy plant from southern Brazil with oval membranous leaflets and large panicles of light-blue flowers. Cultivated in Brazil for forage and silage, being cut while young, as it becomes woody with age.

For previous introduction see 64288.

89214. STYLOSANTHES GUIANENSIS (Aubl.) Swartz. Fabaceae.

A branching herbaceous perennial about 3 feet high, with rusty hirsute stems, trifoliolate leaves of lanceolate sharp-pointed leaflets, and globose heads of small fragrant yellow flowers subtended by leafy bracts. It is native to Guiana and is grown in Brazil as a forage plant wherever alfalfa can be grown.

89215. ADONIDIA MERRILLII Beccari (*Normanbya merrillii* Beccari). Phoenicaceae. **Palm.**

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received October 4, 1930.

Bonga de China or *bonga de Jolo*. A medium-sized palm with graceful somewhat curved pinnate leaves, resembling the common betel-nut palm, but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see 81851.

89216. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Bangkok, Siam. Seeds presented by A. Kerr, Director, Botanical Section, Ministry of Commerce and Communications. Received October 6, 1930.

A wild form.

89217 to 89382.

From New Plymouth, New Zealand. Plants purchased from Duncan & Davies (Ltd.). Received October 6, 1930.

A collection of plants native to New Zealand.

89217 to 89221. CARMICHAELIA spp. Fabaceae.

89217. CARMICHAELIA ARBOREA (Forst. f.) Druce (*C. australis* R. Br.).

A shrub up to 9 feet high, somewhat resembling Scotch broom, with thin flat branches. The clusters of small pealike lilac-striped flowers are followed by small black pods the sides of which drop off and expose the bright-red seeds surrounded by the dark margin of the pod.

For previous introduction see 77176.

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in, so that definite identification can be made.

89217 to 89382—Continued.

89218. CARMICHAELIA COMPACTA Petrie.

An erect densely branched leafless evergreen shrub 2 to 4 feet high, with numerous slender erect branchlets, and small fragrant pinkish-white flowers in numerous lax racemes half an inch long.

89219. CARMICHAELIA GRANDIFLORA (Benth.) Hook. f.

An erect or spreading, much-branched evergreen shrub 2 to 8 feet high, usually leafy save in exposed situations. The leaves are numerous, pinnately 3-foliolate to 5-foliolate, and silky pubescent when young. The small purplish flowers are in lax racemes an inch long.

89220. CARMICHAELIA ODORATA Colenso.

A much-branched shrub 3 to 10 feet high, leafy in the spring and summer. The slender erect racemes of purple flowers are borne on pendulous branches.

For previous introduction see 77177.

89221. CARMICHAELIA WILLIAMSI T. Kirk.

An erect much-branched rigid shrub from the East Cape district of New Zealand. It is entirely leafless, with flat branches half an inch broad. The large yellow flowers, less than an inch across, are in lateral racemes.

89222 to 89233. COPROSMA spp. Rubiaceae.

89222 and 89223. COPROSMA BAUERI Endl.

89222. A shrub or small tree, sometimes a large tree 25 feet high, with thick shining green leaves, broadly ovate, 1 to 3 inches long, and small greenish flowers in short-stalked dense heads.

89223. Variety *Crawfordii*. A variegated form.

89224. COPROSMA CUNNINGHAMII Hook. f.

A stout erect glossy evergreen shrub 5 to 15 feet high, with gray-brown bark and numerous elliptic-oblong, leathery, dark-green leaves 2 to 5 inches long. The inconspicuous flowers are in dense glomerules, succeeded by reddish-orange drupes.

89225. COPROSMA KIRKII Cheeseman.

A much-branched suberect evergreen shrub which often forms masses 2 to 4 feet high. The narrowly linear leaves, an inch or less long, are leathery or membranous. The flowers are small and inconspicuous.

89226. COPROSMA LUCIDA Forst.

A shrub about 15 feet in height, with leathery, glossy bright-green leaves, 2 to 5 inches long. The inconspicuous flowers are wind-pollinated. The plant is often cultivated in gardens for the beauty of its small berrylike drupes, which are brilliant orange red.

For previous introduction see 47879.

89227. COPROSMA MICROCARPA Hook. f.

A tall leafy evergreen shrub with slender, close-set, flattened, spreading branches. The small, flat, linear-lanceolate leaves are in pairs on short lateral branchlets.

89217 to 89382—Continued.

89228. COPROSMA RHAMNOIDES A. Cunn.

A small densely branched evergreen shrub 2 to 6 feet high, with reddish-brown uneven bark and numerous spreading, often rigid and interlaced branches. The leaves, very variable in shape and texture, are less than an inch long. The very small fruits, in axillary clusters, are bright red or reddish black.

89229. COPROSMA RIGIDA Cheeseman.

An erect evergreen shrub 5 to 15 feet high, of rather open habit. The leathery oblong or obovate leaves, one-half inch long, are in pairs on short lateral branchlets, and the small flowers are followed by yellow oblong drupes one-third inch long.

89230. COPROSMA ROBUSTA Raoul.

A stout shrub 2 to 12 feet high, with pale-brown bark, shining-green leaves up to 5 inches long and 2 inches broad, and small greenish flowers in dense heads. The small red or yellow drupes are thickly set.

89231. COPROSMA TENUICAULIS Hook. f.

A much-branched evergreen shrub 4 to 8 feet high, with purplish-brown bark and slender spreading branches which are often much interlaced. The orbicular or ovate flat leaves are up to half an inch long, and the fruits are very small shining black drupes.

89232. COPROSMA TENUIFOLIA Cheeseman.

A sparingly branched evergreen shrub 8 to 15 feet high with slender terete branches and membranous, pale-brown oblong-ovate leaves 2 to 4 inches long.

89233. COPROSMA WILLIAMSII VARIEGATA Hort.

A name for which a description has not been found.

89234. DODONAEA VISCOSA (L.) Jacq. Sapindaceae. **Hopbush.**

Variety *purpurea*. A rapid-growing shrub, up to 15 feet high, with oblong bronzy leaves which become rich purple in winter. The small greenish flowers are in dense terminal panicles.

89235. DRIMYS AXILLARIS Forst. Magnoliaceae.

A small evergreen tree 12 to 25 feet high, with ovate-elliptic glossy leaves 2 to 5 inches long and small greenish-yellow flowers in few-flowered axillary clusters. The reddish wood is used for inlaying.

89236. DRIMYS COLORATA Raoul. Magnoliaceae.

A low evergreen tree, very similar to *Drimys axillaris* but smaller, more compactly branched, and with shorter, stiffer leaves.

89237. GAYA LYALLII (Hook. f.) Baker f. Malvaceae.

A beautiful tree up to 30 feet high, graceful and spreading, with the branchlets covered with stellate hairs. The cordate crenate leaves are 2 to 4 inches long on slender petioles, and the large white flowers, an inch across, are borne in axillary clusters.

For previous introduction see 77560.

89217 to 89382—Continued.

89238 to 89314. HEBE spp. Scrophulariaceae.

A collection of evergreen woody species.

89238. HEBE ACUTIFLORA (Benth.) Cockayne (*Veronica acutiflora* Benth.).

A small erect sparingly branched shrub with slender branches and sessile spreading linear-lanceolate leaves 2 to 3 inches long. The very small flowers are in slender axillary racemes 2 to 4 inches long.

89239. HEBE ALBICANS (Petrie) Cockayne (*Veronica albicans* Petrie).

A low spreading much-branched shrub 2 to 4 feet high, with dark-brown bark. The spreading decussate leaves, oblong-ovate to almost orbicular, are up to an inch long, and the white flowers are in dense racemes in the axils of the upper leaves.

89240. HEBE AMABILIS (Cheeseman) Cockayne (*Veronica amabilis* Cheeseman).

A tall branching shrub 6 to 15 feet or more in height, with spreading oblong-lanceolate flat leaves 2 to 4 inches long and relatively large white flowers less than an inch across in slender axillary racemes.

89241. HEBE AMPLEXICAULIS (Armstrong) Cockayne and Allan (*Veronica amplexicaulis* Armstrong).

An erect or decumbent shrub 1 to 3 feet high, with stout spreading branches and decussate, sessile, very leathery, glaucous, broadly oblong leaves up to an inch in length. The small white flowers are in dense spikes about an inch long, borne near the tips of the branches.

89242. HEBE ANGUSTIFOLIA (A. Rich.) Cockayne and Allan (*Veronica angustifolia* A. Rich.).

An erect bushy shrub 5 to 18 feet high, with purplish-brown bark and sessile, narrowly linear, dark-green leaves 1 to 3 inches long. The small pale-lilac flowers are in numerous axillary racemes near the ends of the branches.

89243. HEBE ANNULATA (Petrie) Cockayne and Allan (*Veronica annulata* Petrie).

A small bushy shrub with short stout branches and dark brown bark. The leaves, in opposite pairs, are but one-sixteenth of an inch long, forming a sheath surrounding the branch. The small white flowers are in small terminal heads.

89244. HEBE ANOMALA (Armstrong) Cockayne (*Veronica anomala* Armstrong).

An erect bush, 3 to 5 feet high, with spreading, sessile or nearly sessile, shining dark-green leathery linear-oblong leaves nearly an inch long. The small white or pale-pink flowers are in spikes crowded near the ends of the branches.

89245 and 89246. HEBE ARMSTRONGII (Johnson) Cockayne and Allan (*Veronica armstrongii* Johnson).

89245. A low bush about 2 feet high, with very numerous branchlets clothed in imbricating hairs. In mature plants the closely imbricated leathery leaves form sheaths inclosing the branches. The white flowers are in small terminal heads.

89246. Variety *minor*. A smaller form.

89247. HEBE BALFOURIANA (Hook. f.) Cockayne (*Veronica balfouriana* Hook. f.).

An erect shrub about 3 feet high, with dark-brown bark and flexuose purplish-brown branches. The bright pale-green leathery leaves, margined with red-brown, are in loose pairs, and the pale violet-blue flowers are in opposite axillary racemes.

89248. HEBE BARKERI Cockayne (*Veronica barkeri* Cockayne).

A stout branching shrub with erect branches and spreading sessile thick fleshy dull-green lanceolate leaves about 2 inches long. The small pale-lilac flowers are in dense axillary racemes.

89249. HEBE BIGGARII Cockayne (*Veronica biggarii* Cockayne).

A low decumbent shrub up to 3 feet high, with slender spreading branches and close-set leathery oblong somewhat distichous leaves about half an inch long. The small white flowers are in numerous dense axillary racemes.

89250. HEBE BLANDA (Cheeseman) Pennell (*Veronica amabilis blanda* Cheeseman).

Closely related to *H. amabilis*, but with shorter leaves and denser, shorter flower clusters.

89251. HEBE BOLLONSII (Cockayne) Cockayne and Allan (*Veronica bollonsii* Cockayne).

A low erect bush 3 to 5 feet high, with smooth shining thick-margined oblong leaves 1 to 3 inches long and pale-lilac flowers in many-flowered racemes.

89252 and 89253. HEBE BUCHANANI (Hook. f.) Cockayne and Allan (*Veronica buchanani* Hook. f.).

89252. A small bush a foot or less high, with stout spreading branches, sometimes tortuous, and decussate closely imbricate leathery broadly oblong leaves about one-half inch in length. The small white flowers are in short spikes near the tips of the branches.

89253. Variety *major*. A taller and stouter variety, with larger leaves and flower spikes.

89254 to 89265. HEBE BUXIFOLIA (Benth.) Cockayne and Allan (*Veronica buxifolia* Benth.).

89254. A stout erect shrub 1 to 5 feet high, with densely leafy strict branches and closely imbricate, broadly oblong, rigid dark-green leaves about one-fourth inch long. The small white flowers are in dense axillary spikes.

89255. Variety *compacta*. A form of more compact habit.

89217 to 89382—Continued.

89256. Variety *patens*. A variety with spreading leaves, larger flowers, and more numerous spikes.

89257. HEBE CARNEA Hort.

A garden hybrid of unknown origin. It is a shrub about 2 feet high, with rose-colored flowers.

89258. HEBE CARNOSULA (Hook. f.) Cockayne (*Veronica carnosula* Hook. f.).

An erect bush up to 3 feet high, with stout spreading branches and closely imbricating sessile broadly obovate leathery leaves about half an inch long. The small white flowers are in crowded spikes near the ends of the branches. Closely allied to *Veronica pinguifolia*.

89259. HEBE CARSEI (Petrie) Cockayne (*Veronica carsei* Petrie).

An erect shrub 2 to 6 feet high, with virgate branches, dark-brown bark, and close-set sessile leathery flat elliptic-oblong leaves about an inch long. The white flowers are in slender racemes 2 to 3 inches long.

89260. HEBE CASSINIOIDES (Matthews) Cockayne (*Veronica cassinioides* Matthews).

A low erect shrub with fastigiate branches, leathery decussate triangular-lanceolate leaves, and white flowers in spikelike racemes.

89261. HEBE COARCTATA (Cheeseman) Cockayne and Allan (*Veronica coarctata* Cheeseman).

A low stout much-branched shrub 1 to 3 feet high, with densely imbricating leaves one-tenth inch long and small white flowers which form small terminal heads near the tips of the branches.

89262. HEBE COLENSOI (Hook. f.) Cockayne (*Veronica colensoi* Hook. f.).

A low bush up to 18 inches high, with branches leafy above. The rather close-set sessile dark-green leathery lanceolate leaves are about an inch long, and the white flowers are in slender racemes slightly longer than the leaves.

89263. HEBE CORRIGANII Carse.

A small shrub 3 to 5 feet high, with smooth stout branchlets and linear-lanceolate irregularly toothed strongly keeled leaves less than an inch long. The pale-lilac or white flowers are in loose racemes about as long as the leaves. This species is usually found in situations close to running water.

89264. HEBE DARTONI (Petrie) Cockayne (*Veronica dartoni* Petrie).

A compact shrub 3 to 5 feet high, with reddish-brown branchlets and decussate narrowly obovate leaves nearly an inch long. The lavender flowers are in axillary racemes.

89265. HEBE DECUMBENS (Armstrong) Cockayne and Allan (*Veronica decumbens* Armstrong).

A small decumbent bush 3 feet or less in height, with purplish-black branches and small white flowers in short dense racemes. The leathery elliptic-oblong leaves, half an inch long, are dark green with bright-red margins.

89266. HEBE DIFFENBACHII (Benth.) Cockayne and Allan (*Veronica diffenbachii* Benth.).

A robust, much-branched shrub with branches from 2 to over 5 feet long and spreading, often recurved, linear-oblong thick pale-green leaves 2 to 4 inches long. The usually lilac-purple flowers are in dense racemes 2 to 8 inches long.

89267. HEBE DIOSMIFOLIA (R. Cunn.) Cockayne and Allan (*Veronica diosmifolia* R. Cunn.).

A low, much-branched shrub some times over 5 feet high, with close-set oblong-lanceolate leathery dark-green leaves less than an inch long and white or pale lavender-blue flowers in small banded racemes.

89268. HEBE DIVARICATA (Cheeseman) Cockayne and Allan (*Veronica menziesii divaricata* Cheeseman).

A shrub 3 to 12 feet high, with slender spreading branches, narrowly lanceolate, often falcate, spreading or deflexed coriaceous leaves 1 to 2 inches long, and copiously branched racemes of small white or lavender flowers.

89269. HEBE DORRIEN-SMITHII (Cockayne and Allan (*Veronica dorrien-smithii* Cockayne).

A low straggling shrub with slender branches, and sessile pale-green leaves, very variable in size and shape, 2 to 3 inches long. The white or pale-lavender flowers are in small racemes.

89270. HEBE ELLIPTICA (Forst. f.) Pennell (*Veronica elliptica* Forst. f.).

A copiously branched shrub or small tree 5 to 20 feet high, with horizontally spreading petiolate pale-green elliptic-oblong leaves about an inch long and sweet-scented white or purple-lined flowers in numerous short lax racemes.

89271. HEBE ELLIPTICA CRASSIFOLIA Cockayne and Allan.

A form confined to the coastal rocks and having pale-green branchlets, thick dark-green glistening leaves, and few-flowered racemes or large white flowers.

89272. HEBE EVENOSA (Petrie) Cockayne and Allan (*Veronica evenosa* Petrie).

A tall spreading shrub 4 to 8 feet high, with narrow elliptic thin dull-green leaves about an inch long and small white flowers in dense racemes twice as long as the leaves.

89273. HEBE GLAUCO-CAERULEA (Armstrong) Cockayne (*Veronica glauco-caerulea* Armstrong).

Closely related to *Hebe pimelioides* but stouter, and with more glaucous leaves.

89274. HEBE GLAUCOPHYLLA Cockayne (*Veronica glaucophylla* Cockayne).

A low compact rounded shrub with brownish-green bark and rather laxly set decussate thick ovate-lanceolate

89217 to 89382—Continued.

leaves half an inch long. The white flowers are in short dense racemes with tapering tips.

89275. HEBE HECTORI (Hook. f.) Cockayne and Allan (*Veronica hectori* Hook. f.).

A low robust bush 6 to 30 inches high, with rigid erect branches and thick densely imbricated leaves forming closely appressed rings around the branches. The small white flowers are in small terminal heads crowded near the tips of the branches.

89276. HEBE HULKEANA (F. Muell.) Cockayne and Allan (*Veronica hulkeana* F. Muell.).

A form with shining dark-green coarsely toothed leaves about 2 inches long and long sprays of lilac-colored flowers in panicles sometimes a foot long.

89277. HEBE IMBRICATA (Petrie) Cockayne and Allan (*Veronica imbricata* Petrie).

An erect compact shrub 1 to 2 feet high, with thick coriaceous scalelike leaves in opposite decussately arranged pairs and compact heads of small flowers.

89278. HEBE KIRKII (Armstrong) Cockayne and Allan (*Veronica kirkii* Armstrong).

A variety with dark-brown branches, small oblong-lanceolate leathery leaves, and white flowers in racemes 4 to 8 inches long.

89279. HEBE LAEVIS (Benth.) Cockayne and Allan (*Veronica laevis* Benth.).

A low densely branched bush 1 to 5 feet high, with erect branches densely leafy above and black bark. The thick rigid decussate close-set leaves, half an inch long, are ovate-oblong, and the small white flowers are in dense racemes.

89280. HEBE LAINGII (Cockayne) Cockayne and Allan (*Veronica laingii* Cockayne).

A small shrub 6 to 10 inches high, the erect branches freely branching toward the top. The ovoid deltoid leaves are densely imbricate in opposite pairs, and the white flowers are in little heads at the tips of the branchlets.

89281. HEBE LEIOPHYLLA (Cheeseman) Cockayne and Allan (*Veronica leiophylla* Cheeseman).

A large spreading shrub 4 to 12 feet high, with spreading sessile leathery linear-oblong leaves an inch long and dense racemes of small white flowers.

89282. HEBE LEWISII (Armstrong) Cockayne and Allan (*Veronica lewisii* Armstrong).

A handsome erect compact bush 3 to 6 feet high, with spreading pale-green elliptic-oblong leathery leaves about 2 inches long and pale-blue flowers in dense racemes an inch in diameter and nearly 3 inches long.

89283. HEBE LIGUSTRIFOLIA (A. Cunn.) Cockayne and Allan (*Veronica ligustrifolia* A. Cunn.).

A small laxly branched shrub 1 to 3 feet high, with oblong or linear-

89217 to 89382—Continued.

oblong flat leaves 1 or 2 inches long. The small white flowers are in long slender racemes near the tips of the branches.

89284. HEBE MACRANTHA (Hook. f.) Cockayne and Allan (*Veronica macrantha* Hook. f.).

A dwarf shrub 1 or 2 feet high, with rigid spreading branches and obovate-lanceolate very thick glossy leaves an inch long. The pure white flowers, less than an inch in diameter, are in few-flowered racemes.

89285. HEBE MACROCARPA AFFINIS (Cheeseman) Cockayne and Allan (*Veronica macrocarpa affinis* Cheeseman).

An erect spreading shrub 4 to 8 feet high, with oblong-lanceolate smooth dark-green stiff leaves 2 to 4 inches long and small white flowers in short racemes 3 to 5 inches long.

89286. HEBE MACROCARPA LATISEPALA (Kirk) Cockayne and Allan (*Veronica macrocarpa latisepala* Kirk).

A variety similar to the type in habit and foliage, but with deep-violet flowers in racemes usually shorter than the leaves.

89287. HEBE MACROURA (Hook. f.) Cockayne and Allan (*Veronica macroura* Hook. f.).

A bushy shrub 1 to 5 feet high, with spreading obovate-lanceolate flat leaves 1 to 3 inches long and white or pale-bluish flowers in very dense racemes 2 to 4 inches long.

89288. HEBE MATTHEWSII (Cheeseman) Cockayne (*Veronica matthewsii* Cheeseman).

A spreading bush 2 to 4 feet high. The oblong-elliptic leaves, an inch long, are sessile, closely set on the branches, and thick and leathery. The racemes of white or purplish-white flowers, 2 to 4 inches long, grow from the axils of the leaves, the individual flowers being about one-third of an inch in diameter.

89289. HEBE MENZIESII (Benth.) Cockayne and Allan (*Veronica menziesii* Benth.).

A compact shrub 3 to 12 feet high, with leafy branches and rigid flat linear-oblong leaves about an inch long. The white or pale-lilac flowers are in short racemes, crowded near the ends of the branches.

89290. HEBE MONTANA (Armstrong) Cockayne and Allan (*Veronica montana* Armstrong).

A much-branched shrub 2 to 5 feet high, densely leafy above, with brown bark. The close-set, more or less imbricate, elliptic-oblong leathery leaves are about an inch long, and the small white flowers are in short compact racemes near the tips of the branches.

89291. HEBE OBOVATA (Kirk) Cockayne (*Veronica obovata* Kirk).

An erect shrub about 4 feet high, with stout branches and thick-leathery narrow-obovate erect leaves an inch long. The small white flowers are in slender erect lax-flowered racemes.

89217 to 89382—Continued.

89292. HEBE OBTUSATA (Cheeseman) Cockayne and Allan (*Veronica obtusata* Cheeseman).

A low shrub 2 or 3 feet high, with flat oblong-elliptic stiff leaves 1 or 2 inches long and pale bluish-white flowers in dense racemes a little longer than the leaves.

89293. HEBE ODORA (Hook. f.) Cockayne (*Veronica odora* Hook. f.).

A slender sparingly branched shrub 2 to 4 feet high, with erect strict branches leafy above and closely imbricate horizontally spreading dull-green ovate-elliptic leaves half an inch long. The spikes of small white flowers form a corymblike head in the axils of the upper leaves.

89294. HEBE PIMELIOIDES (Hook. f.) Cockayne and Allan (*Veronica pimelioides* Hook. f.).

A small more or less prostrate shrub up to 8 inches high, with sessile leathery oblong-ovate glaucous leaves less than one-third inch long and dark purplish-blue flowers in spikes an inch long.

89295. HEBE PINGUIFOLIA (Hook. f.) Cockayne and Allan (*Veronica pinguifolia* Hook. f.).

An erect or decumbent glaucous shrub up to 4 feet high, with very leathery, almost fleshy, broadly oblong leaves half an inch long and often red margined. The white flowers are in short compact spikes an inch long, crowded near the tips of the branches.

89296 and 89297. HEBE PROPINQUA (Cheeseman) Cockayne and Allan (*Veronica propinqua* Cheeseman).

A low bush 1 to 3 feet high, with spreading, sometimes tortuous branches, and densely imbricated leaves in opposite pairs, connate for the greater part of their length, forming a closed sheath around the branch. The white flowers are in small terminal heads.

89296. Variety *major*. Taller, more erect, and stouter than the type.

89297. Variety *minor*. A smaller form.

89298. HEBE PUBESCENS (Banks and Sol.) Cockayne and Allan (*Veronica pubescens* Banks and Sol.).

A slender diffusely branched shrub 4 to 6 feet high, with the young shoots covered with white hairs. The oblong-lanceolate leaves, white-hairy beneath, are 1 to 3 inches long, and the small white flowers are in rather slender many-flowered racemes 2 to 4 inches long.

89299. HEBE RAKAIENSIS (Armstrong) Cockayne (*Veronica rakaiensis* Armstrong).

A small rounded bush of compact habit, 2 to 5 feet high, with linear-oblong flat leaves about an inch long and white flowers in oblong dense clusters.

89300. HEBE RAOULII (Hook. f.) Cockayne and Allan (*Veronica raoulii* Hook. f.).

A stout, much-branched dwarf shrub a foot or less high, leafy above, with

89217 to 89382—Continued.

oblong-spatulate very thick yellow-green leaves half an inch long. The flowers are in very small spikes or heads 1 to 2 inches across.

89301 and 89302. HEBE RIGIDULA (Cheeseman) Cockayne and Allan (*Veronica rigidula* Cheeseman).

89301. A low shrub of erect habit up to 2 feet high, with erect stout almost black branches, leafy at the tips. The close-set linear-oblong very thick and rigid dark-green leaves are less than an inch in length, and the small white flowers are in small dense racemes.

89302. A form about 8 inches high.

89303. HEBE RUPICOLA (Cheeseman) Cockayne and Allan (*Veronica rupicola* Cheeseman).

An erect shrub 1 to 4 feet high, with a few stout branches and glaucous leathery elliptic oblong leaves less than an inch long. The flower spikes are 1 to 2 inches long, much exceeding the leaves.

89304. HEBE SALICIFOLIA ANGUSTISSIMA (Cockayne) Cockayne and Allan (*Veronica salicifolia angustissima* Cockayne).

An erect, much-branched shrub 5 to 12 feet high, with pale-green linear-lanceolate leaves. The small flowers, white with a pale-lilac tinge, are in dense slender racemes 3 to 6 inches in length.

89305. HEBE SALICIFOLIA ATKINSONII (Cockayne) Cockayne and Allan (*Veronica salicifolia atkinsonii* Cockayne).

A variety sometimes prostrate in habit, with pale-green rather thick ovate-oblong leaves over an inch long and white flowers in short dense racemes.

89306. HEBE SALICIFOLIA PALUDOSA (Cockayne) Cockayne and Allan (*Veronica salicifolia paludosa* Cockayne).

A variety with narrow-lanceolate long pointed leaves.

89307. HEBE SALICIFOLIA STRICTA (Banks and Sol.) Cockayne and Allan (*Veronica stricta* Banks and Sol.).

A variety in which the racemes are much more hairy than in the type.

89308. HEBE SALICORNIOIDES (Hook. f.) Cockayne and Allan (*Veronica salicornioides* Hook. f.).

A low shrub 1 to 3 feet high, with stout branches and densely imbricated, very small leaves, appressed to the branches in opposite pairs, connate to above the middle and forming a ring surrounding the branch. The white flowers are in small terminal heads near the tips of the branchlets.

89309 to 89311. HEBE SPECIOSA (R. Cunn.) Cockayne and Allan (*Veronica speciosa* R. Cunn.).

89309. A rare and beautiful stout shrub with crimson flowers in large dense racemes. The leaves are oblong, thick, shining, 1 to 4 inches long and an inch broad

89217 to 89382—Continued.

with a 2-layered epidermis. It flourishes best within reach of the sea spray. Many varieties of this plant are cultivated in gardens.

89310. A form with blue flowers.

89311. A subalpine form.

89312. HEBE TOWNSONI (Cheeseman) Cockayne and Allan (*Veronica townsoni* Cheeseman).

A shrub 3 to 6 feet or more in height, with very thick and leathery linear-lanceolate flat leaves 2 or 3 inches long and white flowers in lax racemes usually longer than the leaves.

89313. HEBE TRAVERSII (Hook. f.) Cockayne and Allan (*Veronica traversii* Hook. f.).

A small compact shrub 2 to 5 feet in diameter, with spreading leathery leaves an inch long and racemes of small white flowers at the tips of the branches.

For previous introduction see 77581.

89314. HEBE TRISEPALA (Colenso) Cockayne (*Veronica trisepala* Colenso).

Closely related to *Hebe diosmifolia*, but having narrower incised leaves and a 3-parted calyx.

89315 to 89331. LEPTOSPERMUM spp. Myrtaceae.

89315. LEPTOSPERMUM ERICOIDES A. Rich.

An evergreen shrub or tree, at times a large tree, with loose papery bark and slender branchlets. The very narrow-lanceolate leaves are but half an inch long, and the small white axillary flowers are usually produced in great profusion.

89316 to 89330. LEPTOSPERMUM SCOPARIUM Forst. **Manuka.**

89316. Variety *boscowenii*. A form with narrow green glaucous leaves and exceptionally large clear-pink flowers an inch across, with a dark eye.

89317. *Cerise.*

89318. *Deep rose pink.*

89319. *Double pink improved.*

89320. *Flush pink* (red in center).

89321. *Double white.*

89322. *Good red.*

89323. A good collection of hybrids.

89324. *Pink.*

89325. *Red center.*

89326. *Rose.*

89327. *Rose pink.*

89328. Variety *rosea*. A form with pale-pink flowers.

89329. Variety *rubra pygmeum*. A dwarf form about 2 feet high with dark-red foliage and flowers.

89330. Variety *sandersii*. A new hybrid, very floriferous, about 5 feet high. The large single pink flowers have a deep-pink center.

89217 to 89382—Continued.

89331. LEPTOSPERMUM SCOPARIUM NICHOLLII (Darr.-Smith) Turrill.

Variety *rubra*.

89332 to 89339. METROSIDEROS spp. Myrtaceae.

89332. METROSIDEROS COLENSOI Hook. f.

A slender climbing evergreen shrub with numerous very slender branches and small narrowly oval distichous leaves. The small pink or whitish flowers are in terminal or lateral cymes about an inch long.

89333. METROSIDEROS DIFFUSA J. E. Smith.

A tall stout evergreen woody climber which reaches the tops of the tallest trees. The very stiff oval-oblong leaves are about an inch long, and the abundant bright crimson flowers are in terminal much-branched cymes.

89334. METROSIDEROS LUCIDA A. Rich.

An evergreen shrub or tree of erect habit with narrow pointed leathery leaves and broad terminal cymes of small bright-crimson flowers.

89335 and 89336. METROSIDEROS PERFORATA (Forst.) A. Rich. (*M. scandens* Sol.).

A high-climbing evergreen shrub with broadly oblong sessile leaves half an inch long and numerous small white flowers in axillary cymes.

89335. Variety *aurata*. A yellow-flowered form.

89336. Variety *magnifica*. A large-flowered form.

89337. METROSIDEROS ROBUSTA A. Cunn. **Rata.**

A large evergreen forest tree, sometimes 100 feet tall. The very leathery elliptic-oval leaves are about an inch long, and the dark scarlet flowers are in broad dense terminal clusters.

89338. METROSIDEROS TOMENTOSA A. Rich.

The *Christmas tree*, so called because of its season of bloom. It becomes eventually a tree 70 feet tall with leaves which vary from lanceolate to broadly oblong and from 1 to 4 inches long. The large dark-crimson flowers are in dense terminal cymes. This is a special form which has adult foliage on young plants.

89339. METROSIDEROS VILLOSA (L.) J. E. Smith.

A freely branching tree up to 60 feet high and 4 feet in diameter, with coriaceous broadly ovate gray-green leaves 2 inches long, white tomentose beneath, and terminal cymes of scarlet flowers conspicuous for their long scarlet stamens as in the other bottlebrushes.

For previous introduction see 77606.

89340 to 89345. NAGEIA spp. Taxaceae.

89340. NAGEIA FERRUGINEA (G. Benn.) Kuntze (*Podocarpus ferruginea* G. Benn.).

A large evergreen tree with gray or blackish bark which peels off in large flakes and small narrow pointed leaves

89217 to 89382—Continued.

arranged in two rows on the branches. The bright-red fruits, the size of small plums, have the taste and odor of turpentine but are eagerly eaten by native pigeons.

For previous introduction see 67893.

89341. NAGEIA HALLII (T. Kirk) Kuntze (*Podocarpus hallii* T. Kirk).

A moderate-sized evergreen tree 25 to 60 feet high, which has thin papery bark and linear rigid leathery close-set distichous leaves about an inch long. This species is very closely related to *Podocarpus totara*.

89342 and 89343. NAGEIA NIVALIS (Hook.) Kuntze (*Podocarpus nivalis* Hook.).

89342. A much-branched evergreen shrub erect or prostrate in habit, with widespreading branches, often rooting at the base. The sessile closely set stiff leathery very narrow leaves are about half an inch long and not distichous. The fruit is a small oblong-ovoid nut and the enlarged fleshy fruiting stems are bright red.

89343. Variety *erectus*. An erect form.

89344 and 89345. NAGEIA TOTARA (D. Don) Kuntze (*Podocarpus totara* D. Don).

89344. A lofty evergreen tree, sometimes 100 feet high, with thick stringy bark and rigid linear dull brownish-green leaves up to an inch in length. The red fruiting stems are usually much enlarged.

89345. A variety which appears to be quite a distinct form from the usual *totara*.

89346 to 89355. VERONICA spp. Scrophulariaceae.

89346. VERONICA BIDWILLII Hook.

A much-branched shrub with slender prostrate branches rooting and often densely matted. The thick leathery rather distant leaves are minute, and the white flowers are in small long-stemmed axillary clusters.

89347. VERONICA BIRLEYI N. E. Brown (*V. grahami* Petrie).

A sparingly branched bush, with somewhat fleshy decumbent stems, forming patches 6 to 8 inches across. The thick fleshy crowded leaves are obovate, more or less tinged with red, and about half an inch long. The few rather large white flowers are in the axils of the upper leaves.

89348 to 89350. VERONICA CATARRACTAE Forst. f.

89348. A sparingly branched suberect shrub with rather distant spreading ovate-lanceolate coarsely serrate leaves 1 to 4 inches long and white or pale-rose flowers in slender racemes 3 to 9 inches long.

89349. Variety *diffusa*. A decumbent form, diffusely branched.

89350. Variety *irrigans*. A form with leaves about 3 inches long.

89217 to 89382—Continued.

89351. VERONICA HOOKERIANA Walp. (*V. nivalis* Benth.).

A small stout prostrate plant, with short stout ascending leafy branches and crowded spreading broadly ovate coarsely crenate rigid leaves half an inch long. The small flowers, varying in color from bluish to violet purple, are in small branched cymes.

89352. VERONICA LOGANIOIDES Armstrong.

A dwarf shrub a foot high, with ovate-lanceolate dull-green leathery leaves in opposite pairs and white or pink-veined flowers in short few-flowered racemes.

89353. VERONICA LYALLII SUBERECTA Cheeseman.

A prostrate plant with slender wiry suberect stems, rooting at the base, and thick narrowly oblong deeply serrate leaves and white pink-veined flowers in numerous racemes.

89354. VERONICA MARTINI Leveille.

An erect shrub with ovate serrate leaves and dark-purple flowers with exserted stamens in elongated spikes. Related to *V. spicata* and *V. sibirica*. Native to China.

89355. VERONICA MUELLERI J. Buchanan.

A prostrate veronica with stems up to 18 inches long, from which rise numerous suberect branchlets 1 or 2 inches long. The leaves, crowded toward the tips of the branchlets, are oblong-ovate, stiff, and about one-fourth inch long. The small solitary flowers are almost hidden in the axils of the leaves near the tips of the branches.

89356. VERONICA OLSENII Colenso.

A small prostrate plant with short densely hairy branches rooting at the nodes. The rather close-set thick dark-green broadly oval leaves are up to half an inch in length, and the flowers, white with pink veins, are in many-flowered racemes.

89357 to 89382. The following were received under names for which places of publication and descriptions have not been found.

89357. VERONICA ANETIDA.

89358. VERONICA BANKSII.

89359. VERONICA BARNETTI.

89360. VERONICA BRYANTI.

89361. VERONICA BURROWSII.

89362. VERONICA CAMPBELLIENSIS.

89363. VERONICA CHRISTENSENENSIS.

89364. VERONICA CHRISTICA.

89365. VERONICA COBBII.

89366. VERONICA DAVIESII.

89367. VERONICA DOUGLASI.

89368. VERONICA ELLIOTTII.

89369. VERONICA FENWICKII.

89370. VERONICA GARVEII.

89371. VERONICA HUNTERI.

89372. VERONICA LINDSAYI.

89217 to 89382—Continued.

89373. VERONICA LOBELLIOIDES.

89374. VERONICA MCEWANII.

89375. VERONICA MCKENSIESII.

89376. VERONICA PROCUMBENS.

89377. VERONICA REIDII.

89378. VERONICA SEATONII.

89379. VERONICA SUTHERLANDII.

89380. VERONICA TANNOCKI.

89381. VERONICA WALKERII.

89382. VERONICA sp.

Received without any label.

89383. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Barcelona, Spain. Seeds presented by E. B. Babcock, University of California, Berkeley, Calif. Received October 7, 1930.

A melon with dark-green tough rind and pale-green fine-grained flesh, fairly sweet and of good flavor.

89384. CASUARINA MONTANA Leschen. Casuarinaceae.

From Ceylon. Seeds presented by K. J. A. Sylver, Acting Curator, Botanic Gardens, Hakgala. Received October 8, 1930.

A beautiful species with drooping branches, growing in the cool rainy region of Hakgala.

For previous introduction see 66652.

89385. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Crete. Seeds presented by E. B. Babcock, University of California, through F. T. Bioletti, University of California, Berkeley, Calif. Received October 10, 1930.

An apricot of good size and fairly good quality.

89386. CITRUS sp. Rutaceae.

From the island of Guam. Bud sticks presented by the Agricultural Experiment Station. Received October 11, 1930.

Cahit, or native orange.

89387. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

From Manchuria. Seeds purchased from Manchu Nosan, Shokai, Dairen. Received October 11, 1930.

A grass which makes a very compact sod, but only a short growth.

For previous introduction see 81298.

89388 to 89399.

From China. Seeds and tubers collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 9, 1930.

89388. ASTRAGALUS sp. Fabaceae. **Milkvetch.**

No. 7088. August 21, 1930, from Ching Lung Chiao. An astragalus with spikes of blue flowers, growing on a rocky mountain side near the Great Wall.

89388 to 89399—Continued.

89389. THLADIANTHA DUBIA Bunge. Cucurbitaceae.

No. 7044. August 13, 1930, from the grounds of the Temple of Heaven, Peiping. Tubers of a wild yellow-flowered cucumberlike plant with the under sides of the leaves very sticky.

89390. ERODIUM STEPHANIANUM Willd. Geraniaceae. **Heronbill.**

No. 7015. August 9, 1930, from the Shih Tzu Wo Temple. A villous branching annual or biennial with bipinnatifid leaves and dark-purple flowers in clusters of three to five. It is native to temperate Asia.

For previous introduction see 64770.

89391. LESPEDEZA sp. Fabaceae. **Bushclover.**

No. 7092. August 21, 1930, from the vicinity of the Great Wall, northeast of Nankou, Chihli.

89392. MELILOTUS sp. Fabaceae. **Sweetclover.**

No. 7094. August 21, 1930, from Ching Lung Chiao, near the Great Wall. A not very abundant yellow-flowered variety, growing on a rocky mountain side.

89393 to 89396. From the Ming Tao Tomb, August 22, 1930.

89393. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 7098. Light-green bean with white hilum; purchased at Nankou.

89394. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 7100. A mottled variety.

89395 and 89396. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

89395. No. 7096. A mixed lot of locally grown varieties purchased at Nankou.

89396. No. 7097. Seeds uniformly pea green, prominent black hilums; may prove valuable in the manufacture of salad oils.

89397. ZEA MAYS L. Poaceae. **Corn.**

No. 7065. From near Peiping, at Yen Chiao, August 17, 1930. A red variety, which is very rare in China, and the first I have ever seen.

89398. SCUTELLARIA BAICALENSIS Georgi. Menthaceae. **Skullcap.**

No. 7016. *Huang chin,* locally known as mountain tea. Collected at the Shih Tzu Wo Temple, August 8, 1930. An attractive plant, 6 to 12 inches high, with deep-blue flowers.

89399. ASTRAGALUS CHINENSIS L. f. Fabaceae. **Milkvetch.**

No. 7049. From Chun Shan An, Western Hills, Chihli Province. An erect herbaceous perennial, native to China, with smooth slender stems, elliptic-obtuse leaflets, and pendulous and few-flowered racemes of yellow flowers.

For previous introduction see 66539.

89400. ALANGIUM CHINENSE (Lour.) Rehder (*Marlea begoniaefolia* Roxb.). Cornaceae.

From Medan, Sumatra. Seeds purchased from J. A. Lorzing through Walter A. Foote, American consul, Medan. Received October 11, 1930.

Variety *tomentosum*. This Indian tree makes a remarkably rapid growth, reaching its full height of 50 feet in five years, after which the trunk merely thickens. It is being planted in Sumatra for its timber.

For previous introduction see 67175.

89401 to 89419.

From Canton, China. Plants presented by G. Weidman Groff, Lingnan University. Received October 13, 1930.

89401. ATALANTIA sp. Rutaceae.

No. 127. A tree form from Saigon.

89402 to 89407. CITRUS spp. Rutaceae.

89402 and 89403. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

89402. No. 43. Kwangsi *Sha t'in yau*. Famous sandfield pomelo from Kwangsi.

89403. No. 129. Red-fleshed pomelo from Saigon.

89404. CITRUS sp.

No. 87. *Chan chi kam*.

89405. CITRUS sp.

No. 89. *Sz kwai kat*, four-season kat.

89406. CITRUS sp.

No. 91. *Sz wui*, fragrant water orange (*Heung shui ch'ang*).

89407. CITRUS sp.

No. 136. *Chue sha kat*, vermilion kat.

89408. CLAUCENA LANSIUM (Lour.) Skeels (*C. wampi* Oliver). Rutaceae. **Wampi.**

No. 131. Sour wampi from Canton.

For previous introduction see 74212.

89409. DIMOCARPUS LONGAN Lour. (*Nephelium longana* Cambess.). Sapindaceae. **Lungan.**

No. 171. Black-ball lungan from Canton.

89410. DIPTEROCARPUS OBTUSIFOLIUS Teijsm. Dipterocarpaceae.

No. 114. A tall tree with broadly ovate obtuse wavy-margined leaves 8 to 10 inches long, densely covered with stellate pubescence. The large reddish-white flowers are in racemes and the nutlike fruits are about 1 inch in diameter with two lanceolate wings almost 5 inches long. It is native to India.

89411. DIPTEROCARPUS PUNCTULATUS Pierre. Dipterocarpaceae.

No. 115. A tree up to 75 feet high with densely stellate pubescent, broadly ovate leaves 6 to 8 inches long, loose racemes of purplish flowers 2 to 3 inches across, and spherical fruits 1 to 2 inches in diameter with two wings 4 to 5 inches long. It is native to Siam.

89401 to 89419—Continued.

89412. GARCINIA COCHINCHINENSIS (Lour.) Choisy. Clusiaceae.

No. 113. A tree with ovate-oblong leaves, small white flowers, and pear-shaped, yellowish-red fruits which are said to be edible. It is related to the mangosteen and is native to southeastern Asia.

89413 to 89415. LITCHI CHINENSIS Sonner. Sapindaceae. **Lychee.**

89413. No. 144. Glutinous rice lychee from Canton.

89414. No. 145. Lingnan *Wai chi* lychee.

89415. No. 146. *Tsang sheng*, mountain lychee. Used for stock.

89416. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

No. 126. From Saigon. A fine variety.

89417. PENTACME SIAMENSIS (Miquel) Kurz. Dipterocarpaceae.

No. 119. A shrub up to 10 feet high with panicles of fragrant citron-yellow flowers 1 inch across, appearing before the leaves. The cordate-oblong leaves are 5 to 6 inches long, and the fruits have linear wings 3 inches long. It is native to Siam.

89418. SANDORICUM KOETJAPE (Burm. f.) Merr. (*S. indicum* Cav.). Meliaceae. **Santol.**

No. 120. An evergreen tree, native to the Philippine Islands, which becomes 80 feet high. It has trifoliolate hairy leaves and greenish-yellow or straw-colored flowers. The chief value resides in its yellowish fruits which are rounded or flattened about 2 inches in diameter, with rather large seeds inclosed in translucent acid edible pulp of good flavor. The fruit makes a delicious preserve. The tree is not suited for cultivation in the United States except perhaps in the warmest parts of Florida.

For previous introduction see 81926.

89419. STERCULIA FOETIDA L. Sterculiaceae. **Hazel bottletree.**

No. 111. A tall handsome tropical Asiatic tree with large compound leaves and spreading panicles of dull-red flowers.

For previous introduction see 77170.

89420 and 89421.

From Giza, Egypt. Seeds presented by Thomas W. Brown, Director, Horticultural Section, Ministry of Agriculture. Received October 13, 1930.

89420. CORDIA ALBA (Jacq.) Roem. and Schult. Boraginaceae.

A large bushy shrub 15 to 18 feet high which branches close to the ground and sends up long stiff shoots well furnished with dark-green foliage. The leaves on terete petioles about an inch long are alternate, obovate to obovate-elliptic, 3 or 4 inches long, with entire margins, and the surface is covered with short bristly hairs. The pale-yellow flowers, about half an inch in diameter, are borne in flat-topped corymbs sometimes a foot across. The oblong-obovate fruits are half an inch in length and pearly white

89420 and 89421—Continued.

when ripe, inclosing a single large seed. It is, apparently, a good meliferous plant and of considerable ornamental value.

For previous introduction see 40988.

89421. CORDIA ROTHII Roem. and Schult. Boraginaceae.

A tall shrub or small tree up to 30 feet high with oblong leaves about 3 inches long and terminal cymes of small white flowers followed by ovoid reddish fruits. It is native to Ethiopia and India.

For previous introduction see 56531.

89422 to 89426. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. Common wheat.

From Canberra, Australia. Seeds presented by the Director of Plant Industry. Received October 14, 1930.

89422. C. C. I. No. W. 12. *Abbott.*

89423. C. C. I. No. 45. *Ford.*

89424. C. C. I. No. W. 266. *Dundee.*

89425. C. C. I. No. 314. *Bolton.*

89426. C. C. I. No. 353. *Sultan.*

89427. BIGNONIA sp. Bignoniaceae. Trumpetcreeper.

From Vicosa, Brazil. Seeds presented by P. H. Rolfs, Consultor Technico de Agricultura do Estado de Minas Geraes. Received October 14, 1930.

In Brazil this vine grows near the frost line. The deep canary-yellow flowers are borne in great terminal clusters and appear a little earlier than those of *Bignonia venusta*.

89428. SEDUM sp. Crassulaceae. Stonecrop.

From Mexico. Plants collected by Paul Russell and Max Souviron, Bureau of Plant Industry. Received October 15, 1930.

No. 20. October 2, 1930. From Cerro de Pinar, northeast of Puebla City, Puebla. Found growing on moist rocky banks.

89429. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. Japanese lawngrass.

From Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 15, 1930.

No. 6283. September 3, 1930. Purchased from a Korean woman who had gathered the seed in the country around Keijo, Chosen.

For previous introduction and description see 89387.

89430 and 89431. CROTALARIA spp. Fabaceae.

From Mexico. Seeds collected by Paul Russell, Bureau of Plant Industry. Received October 15, 1930.

89430. CROTALARIA sp.

No. 18. Herbarium specimen No. 246. From Molinas, Puebla (about 25 miles southwest of Puebla City), October 3, 1930. A plant about 8 inches high, found in pastures and in thickets; flowers not seen; pods small.

89430 and 89431—Continued.

89431. CROTALARIA sp.

No. 19. Herbarium specimen No. 247. From Molinas, Puebla, October 3, 1930. A very low plant, 2 to 5 inches high, with larger pods than those of No. 18 [89430].

89432 to 89530.

From Mortefontaine, Oise, France. Plants purchased from Jules Chantrier. Received October 15, 1930.

89432 to 89446. AECHMEA spp. Bromeliaceae.

89432. AECHMEA CALYCULATA (Morren) Baker (*Hoplophytum calyculatum* Morren).

The small bright lemon-yellow flowers of this aechmea are borne in a dense globose head over 1 inch in diameter, on a scape a foot high. The plain-green leaves are 1 to 2 feet long. Native to southern Brazil.

89433. AECHMEA COELESTIS (Koch) Morren.

A tropical epiphytic plant with about 15 linear leaves almost a foot long, armed with minute marginal teeth, and forming a rosette from which rises the dense panicle 4 to 6 inches long. The petals of the small flowers are blue and the sepals white. Native to Brazil.

89434. AECHMEA DRAKEANA Andre.

The dozen leaves which compose the rosette of this Ecuadorian plant are strap-shaped, 1 to 2 feet long, chartaceous, and tinged with violet. The lax spike, about 6 inches long, bears flowers 2 inches long with sky-blue petals and bright-red sepals.

89435. AECHMEA FASCIATA (Lindl.) Baker (*Billbergia rhodocyanea* Lemaire).

An aechmea from southern Brazil, consisting of a rosette of about 20 strap-shaped leaves 1 to 2 feet long, green with abundant white spots and whitish crosslines on the back. The pink-petaled flowers, three-fourths inch long, are in an erect oblong head 2 to 4 inches long.

89436 and 89437. AECHMEA FULGENS Brongn.

89436. This species, which comes from French Guiana, has a rosette of about 20 strap-shaped leaves a foot or more long from which rises the bright-red peduncle bearing the numerous small pale-lilac flowers marked by red sepals.

89437. Variety *discolor*. A Brazilian variety with the lower surface of the leaves bright claret brown.

89438. AECHMEA LEGRELLIANA Baker (*Ortgiesia legrelliana* Baker).

The plain-green sword-shaped leaves of this aechmea, about 20 in number, are a foot or more long, and the purplish-red flowers are in a dense erect oblong spike. Native to Uruguay.

89432 to 89530—Continued.

89439. AECHMEA MINIATA DISCOLOR (Beer) Baker.

With a rosette composed of a dozen leaves over a foot long, claret brown beneath, this Brazilian species produces a rather dense panicle of small lilac flowers with bright-red sepals.

89440 and 89441. AECHMEA NUDICAULIS (L.) Griseb. (*Billbergia nudicaulis* Lindl.).

89440. A species widely distributed in tropical America. Its horny strap-shaped leaves, 2 to 3 feet long, are armed with small triangular marginal prickles, and the pale lemon-yellow flowers are in a lax drooping spike on a peduncle 1 to 2 feet long.

89441. Received as *Billbergia nudicaulis*, which is now generally referred to *Aechmea*.

89442. AECHMEA ORTGIESII Baker (*Ortgiesia tillandsioides* Regel).

The sessile rosette of this Uruguayan aechmea consists of about 30 ensiform long-pointed leaves a foot long. The bright-red flowers are in a dense central head.

89443. AECHMEA PINELIANA (Brongn.) Baker (*Echinostachys pineliana* Baker).

A rather large aechmea 2 to 3 feet high, with spiny edged strap-shaped leaves 12 to 18 inches long, a brilliant red peduncle and bracts, and a dense spike of golden-yellow flowers that darken as they fade. It is native to southern Brazil.

89444. AECHMEA VEITCHII (Morren) Baker (*Chevalieria veitchii* Morren).

A Colombian aechmea with a dozen suberect plain-green leaves almost 2 feet long and pale-yellow flowers about 2 inches long in a dense oblong spike 2 inches in diameter and 3 to 4 inches in length.

89445 and 89446. AECHMEA WEILBACHII F. Didr.

89445. The rather short leaves of this species, which comes from southern Brazil, are overtopped by the red-stemmed and red-bracted scape. The small but numerous lilac flowers with bright-red sepals are in a narrow panicle 4 to 6 inches long.

89446. Variety *purpurata*. A form with purplish leaves.

89447 to 89453. AREGELIA spp. Bromeliaceae.

89447. AREGELIA CAROLINAE (Beer) Mez (*Nidularium meyendorfii* Regel).

The rather horny leaves of this species, 20 in number, are a foot long and plain bright green on both sides. The lilac and white flowers are in a dense central head in the midst of the bright-red reduced inner leaves. Native to southern Brazil.

89448. AREGELIA CHLOROSTICTA (Baker) Mez (*Nidularium chlorostictum* Morren).

In habit this aregelia resembles a billbergia, with 12 to 20 strap-shaped leaves in a long rosette. The leaves

89432 to 89530—Continued.

are reddish brown, with copious green spots, and the flowers, with red-tinged sepals, are in a small head. Native to Brazil.

89449. AREGELIA ELEGANS Mez (*Nidularium elegans* Hort.).

The dozen sword-shaped leaves of this plant, up to 2 feet long, are marked on the back by distinct transverse bands of darker and paler green. The small violet flowers are in a small central head. Probably native to Brazil.

89450. AREGELIA MARMORATA (Baker) Mez (*Nidularium marmoratum* Hort.).

About a dozen spreading leaves a foot in length make up the rosette of this Brazilian aregelia. The pale-green surface of the leaves is copiously marbled with red-brown blotches. The small pale-violet flowers are in a dense central head 1 or 2 inches in diameter.

89451. AREGELIA PRINCEPS (Morren) Mez (*Nidularium princeps* Hort.).

A Brazilian aregelia with a short rosette of 15 to 20 glaucous green strap-shaped leaves a foot long and violet-red flowers in a globose head in the center of 6 to 10 ovate bright-red reduced leaves.

89452. AREGELIA SPECTABILIS (T. Moore) Mez (*Nidularium spectabile* T. Moore).

The 20 to 30 leaves of this Brazilian species are a foot or more long, green tinged with brown on the face, and on the back conspicuously marbled with transverse bands of reddish brown. The tip is spotted with bright red. The central flower head consists of nearly 50 small violet flowers.

89453. AREGELIA TRISTIS (Regel) Mez (*Nidularium triste* Regel).

With 10 or 12 short sword-shaped leaves, green mottled with brown spots, this Brazilian aregelia has white and violet flowers in a dense central cluster. Native to southern Brazil.

89454 to 89468. BILLBERGIA spp. Bromeliaceae.

89454. BILLBERGIA CAPPEI Morren.

A hybrid between *Billbergia speciosa* and *B. vittata*. The rosette of this plant consists of 10 to 12 obtuse horny leaves 2 feet or more long, copiously banded with white on the back; the marginal prickles are minute. The peduncle is a foot long, with several large red bracts near the top, and the violet-blue flowers are in a lax panicle.

89455. BILLBERGIA DECORA Poepp. and Endl.

Variety *tenuifolia*. A form with thinner leaves. The 8 or 10 leaves, 1 to 2 feet long, which form the rosette of this plant are connivent for about 6 inches and are marked on the back with irregular transverse white mealy bands. The pale-green flowers are in a dense spike about 3 inches long, half hidden by the pink leafy bracts. Native to tropical South America.

89456. BILLBERGIA FORGETIANA Sand.

A tropical American epiphyte with a rosette of large strap-shaped leaves, green with white bands.

89432 to 89530—Continued.

89457. BILLBERGIA LEOPOLDI (Lem.) Morren.

The horny, channeled leaves of this Brazilian species are 3 feet long, connivent for about a foot, and marked by irregular white blotches on the back. The flowers, with violet petals 2 inches long, are in a dense oblong spike 6 to 9 inches long.

89458. BILLBERGIA LIBONIANA DeJonghe.

With a rosette of five or six sword-shaped plain-green leaves 1 to 2 feet long, this Brazilian billbergia produces a spike a foot high bearing flowers with green violet-tipped petals 2 inches long and bright-red sepals an inch in length.

89459. BILLBERGIA NUTANS H. Wendl.

The linear, rather soft leaves, a foot long, of this billbergia are distinctive. The blue-edged petals of the flowers, which are in a lax drooping raceme, make a striking contrast with the bright-red leafy bracts. Native to Brazil.

89460 to 89462. BILLBERGIA PYRAMIDALIS (Sims) Lindl.

A Brazilian billbergia rather variable in many of its characters. The 10 to 12 thin-textured, dull-green leaves, about 2 feet long, are faintly white-mottled on the back and armed with minute marginal teeth. The flowers, with mauve-scarlet petals 2 inches long, are in a dense spike about 4 inches long, with narrow bright-red leafy bracts.

89460. Variety *splendida*. More robust than the type, with more numerous flowers, brighter in color.

89461. Variety *thyrsoidea*. Flowers more numerous than the type; the petals are bright red with violet-purple tips.

89462. Variety *croyana*. Leaves erect; flowers more numerous with red petals edged with violet.

89463. BILLBERGIA SAUNDERSII Bull.

A Brazilian species closely allied to *Billbergia vittata*, with about five green to brownish-green leaves up to 2 feet long which have copious white spots and white transverse bands beneath and close-set small bright-brown marginal teeth. The flower petals are bright lilac at the tips, and the anthers are orange yellow.

89464 to 89467. BILLBERGIA SPECIOSA Thunb. (*B. amoena* Lindl.).

One of the more commonly cultivated billbergias, with many garden forms. The 10 or 12 strap-shaped leaves which form the rosette are over a foot long, connivent in the lower foot, with minute deltoid marginal prickles. The pale-green peduncle, with numerous bright-red leafy bracts 3 to 4 inches long, bears a lax panicle of flowers. The petals, 2 inches long, and the sepals are green with violet tips. Native to southern Brazil.

89464. Received as *B. amoena*, which is now referred to *B. speciosa*.

89465. Received as *B. pallida*, which is now considered the same as *B. speciosa*.

89432 to 89530—Continued.

89466. Variety *wiotiana*.

89467. Variety *variegata*.

89468. BILLBERGIA ZEBRINA Lindl.

The deep-green leaves of this South American species are mottled with gray-white blotches and have stout marginal spines. The green or yellow-green flowers are in a long loose drooping cluster.

89469. CANISTRUM AMAZONICUM (Linden and Andre) Mez (*Nidularium amazonicum* Linden and Andre). Bromeliaceae.

A stoloniferous canistrum from the Amazon Valley with 15 to 20 greenish-brown leaves, lanceolate, broader in the middle, uniformly claret brown on the back. The white flowers are in a dense head in the center of the rosette.

89470 to 89480. CRYPTANTHUS spp. Bromeliaceae.

89470 and 89471. CRYPTANTHUS ACAULIS (Lindl.) Beer.

89470. A Brazilian epiphyte with stolons often overtopping the rosette, which consists of a dozen plain green leaves 4 to 6 inches long. The white flowers, with petals an inch long, are in a head more or less hidden among the leaves.

89471. Received as *C. undulatus*, which is now generally referred to *C. acaulis*.

89472. CRYPTANTHUS BEUCKERI Morren.

A Brazilian cryptanthus with 12 to 20 oblong-acute leaves 5 inches long, narrowed to a broad channeled petiole 2 to 3 inches long, pale brownish on the face and mottled with copious darker green spots. The white flowers are in a small head in the center of the rosette.

89473 to 89475. CRYPTANTHUS BIVITTATUS Regel.

89473. A species with a short stoloniferous rosette of 20 oblong-lanceolate leaves marked with two distinct vertical bands, often tinged with brown on the back and with close minute marginal prickles. The white flowers, an inch long, are in a tuft in the center of the rosette. Native to southern Brazil.

89474. Variety *moensis*. A form which is shorter and stouter than the type.

89475. Variety *luddemannii*. A form, stouter than the type, with leaves 2 inches wide, much tinged with brown.

89476. CRYPTANTHUS LACERDAE Antoine.

The depressed rosette of this species, about 2 inches high, is composed of a dozen somewhat ovate glaucous-green leaves about 3 inches long, scurfy white beneath. The white flowers are in a small cluster half hidden in the rosette. Native to South America.

89477. CRYPTANTHUS OSYANUS Makoy.

A small epiphyte with about 12 oblong acute leaves 4 inches long, armed with minute marginal teeth and small white flowers in a small head in the center of the rosette of leaves.

89432 to 89530—Continued.

89478 to 89480. CRYPTANTHUS ZONATUS Beer.

The 10 to 12 dark-green leaves of this Brazilian cryptanthus are oblong lanceolate and 6 to 9 inches long. The small tuft of white flowers is produced in the center of the rosette of leaves.

89478. Variety *fuscus*. A form with tawny leaves.

89479. Variety *bruneis*. A form with brownish leaves.

89480. Variety *viridis*. A form with leaves greener than the type.

89481 to 89485. GUZMANIA spp. Bromeliaceae.

89481 to 89483. GUZMANIA LINGULATA (L.) Mez.

The rosette of this guzmania consists of 30 to 40 thin lanceolate leaves nearly 2 feet long, striped vertically with red brown on the back. The yellowish-white flowers, 1 to 2 inches long, are in a globular cluster on a scape a foot long, overtopped by the bright-red leafy bracts 1 to 2 inches long. Native to the West Indies and northern South America.

89481. Variety *cardinalis*. A form with larger and more brightly colored outer bracts.

89482. Variety *splendens*. A form with larger and more brightly colored outer bracts.

89483. Received as *Nidularium splendens*, which is now referred to *Guzmania lingulata*.

89484. GUZMANIA MUSAICA (Linden) Mez (*Tillandsia musaica* Linden).

The 15 to 20, rather horny leaves of this species are copiously marked on the back with fine wavy red-brown lines on a purple-tinted green ground. The whitish flowers are in a globose head 3 inches in diameter with bright-red flower bracts up to an inch long. Native to Colombia.

89485. GUZMANIA ZAHNII (Hook. f.) Mez (*Tillandsia zahnii* Hort.).

A yellow flowered epiphyte from Panama, with a rosette of 20 to 30 thin lanceolate falcate leaves conspicuously striped with red brown on both sides near the base. The flowers are in a dense panicle 3 to 4 inches long.

89486 to 89491. NIDULARIUM spp. Bromeliaceae.

89486. NIDULARIUM CHANTRIERI Andre.

A hybrid between *Nidularium fulgens* and *N. innocentii*. The dark-green leaves are violet beneath, and the floral bracts are a brilliant blood red.

89487 and 89488. NIDULARIUM FULGENS Lemaire.

89487. The short dense rosette of this nidularium consists of 15 to 20 strap-shaped spreading bright-green leaves about a foot long, copiously marked with spots of darker green. The flowers, which have violet corollas and white tubes, are in a dense central cluster, surrounded by the brilliant scarlet reduced inner leaves. Native to southern Brazil.

89432 to 89530—Continued.

89488. Variety *joliboisy*.

89489. NIDULARIUM INNOCENTII Lemaire.

A stoloniferous plant from southern Brazil which consists of a rosette of 20 strap-shaped leaves less than a foot long, green tinged with brown, and white flowers.

89490. NIDULARIUM NEGLECTUM Andre.

The bright-green lanceolate leaves of this nidularium are about a foot long, and the white flowers are in a small central head, surrounded by a few brownish-green reduced leaves. Probably native to Brazil.

89491. NIDULARIUM SCHEREMETIEWII Regel.

A nidularium with 10 to 15 sharply serrated lanceolate leaves a foot or more long, which are bright green above, and violet flowers in a small head surrounded by the bright-scarlet reduced inner leaves. Native to southern Brazil.

89492 to 89497. PITCAIRNIA spp. Bromeliaceae.

89492. PITCAIRNIA ALTENSTEINII Lemaire (*Puya altensteinii* Klotzsch).

An alpine species from Venezuela with 12 to 20 weak recurving papery leaves 2 to 3 feet long, green on both surfaces. The simple raceme of white flowers is made showy by the bright-red bracts 1 to 2 inches long.

89493. PITCAIRNIA ANDREANA Linden.

A Venezuelan pitcairnia less than a foot high, of the *P. australis* group, with lanceolate drooping chartaceous leaves, white beneath, and bright-red flowers over 2 inches long in a moderately dense erect raceme 5 inches in length.

89494. PITCAIRNIA CORALLINA Linden.

The outer leaves of this Colombian species are hard, dry, and spineless; the inner leaves have brown-spined petioles and broad plicate recurved blades. The coral-red flowers, 3 inches long, are in a raceme borne on a bright-red scape a foot high.

89495. PITCAIRNIA DARBLAYANA Baker.

A hybrid between *P. corallina* and some unknown species.

89496. PITCAIRNIA PLATYPHYLLA Schrad.

With a dense tuft of linear leaves 2 to 3 feet long, covered beneath with white mealy scales and spiny margined near the base, this West Indian pitcairnia has bright-red flowers 2 inches long in a lax raceme on a scape a foot in length.

89497. PITCAIRNIA TABULAEFORMIS Linden.

The 20 to 30 spreading or reflexed leaves of this tropical Mexican species are 5 or 6 inches long, papery in texture, and green on both sides. The bright-red flowers, 30 to 40 in number, form a dense central head.

89498. PORTEA KERMESINA Brongn. Bromeliaceae.

The 8 or 10 leaves which form the rosette of this Brazilian plant are 2 feet or more long, bright purple on the back,

89432 to 89530—Continued.

plain green or purple spotted on the face, with small brown marginal prickles. The violet flowers, an inch long, are in an ample erect panicle 6 inches long.

89499. STREPTOCALYX VALLERANDI (Carr.) Morren. Bromeliaceae.

A large tropical epiphyte with a compact rosette of about 40 leaves, 3 to 4 feet long, bright green above and gray beneath. The violet flowers are in a dense panicle 1 to 2 feet high, with small oblong bright-red bracts. Native to the Amazon Valley.

89500 to 89507. TILLANDSIA spp. Bromeliaceae.

89500. TILLANDSIA BULBOSA Hook.

A small scurfy tillandsia, a few inches high, the stem swollen at the base, and much dilated leaves clasping at the base and terete above. The few purple flowers are in short racemose spikes. Native to the West Indies and northern South America.

89501 and 89502. TILLANDSIA LINDENI Regel.

An Andean tillandsia with a dense rosette of acuminate-ensiform leaves a foot or more long, longitudinally striped with brown on the back near the base, and bright-blue flowers with petals an inch wide in a compact spike up to 6 inches long.

89501. Variety *intermedia violacea.*

89502. Variety *regeliana.* A form with longer peduncle, green bracts, and a large white eye on the petals.

89503. TILLANDSIA ORTGIESIANA Morren.

A Mexican epiphyte with stout subulate densely white scurfy leaves a foot or more long and pale-violet flowers in a small sessile spike.

89504. TILLANDSIA STRICTA (Beer) Soland. (*Anoplophytum strictum* Beer).

The leafy stem of this epiphyte is either short or several inches long. The numerous rigid linear acuminate falcate leaves are 4 to 6 inches long, and the lilac or white flowers are in a simple dense spike an inch long. Native to South America.

89505. TILLANDSIA TENUIFOLIA L.

A small reddish tillandsia with numerous erect subulate scurfy leaves, and bluish-violet flowers in small dense spikes. Native to tropical America from Mexico to Brazil.

89506. TILLANDSIA VESTITA Cham. and Schlecht.

A Mexican tillandsia with a leafy stem 3 or 4 inches long, and rigid subulate densely scurfy leaves about 7 inches long. The yellow flowers are in a compact simple spike 1 or 2 inches long.

89507. TILLANDSIA sp.

These plants are suited for growing on the bark of trees.

89508 to 89521. VRIESIA spp. Bromeliaceae.

89432 to 89530—Continued.

89508. VRIESIA BARILLETI Morren.

The 15 to 20 bright-green leaves of this Andean species are lanceolate, thin, and flexible, and over a foot long. The pale-yellow flowers are in a simple dense spike 8 to 12 inches in length.

89509. VRIESIA CARINATA Wawra (*V. brachystachys* Regel).

The rosette of this species consists of 15 to 20 thin flexible plain-green leaves, 6 to 8 inches long, and the pale-yellow flowers are in a dense spike 2 or 3 inches long. The oblong flower bracts, over an inch long, are bright red at the base and yellow in the upper half. Native to forests in southern Brazil.

89510. VRIESIA DUVALIANA Morren.

The thin strap-shaped leaves of this vriesia, 15 to 20 in number, are 6 inches long, green on the face, and tinged with purple beneath. The yellowish-green flowers, with petals an inch long, are in a fairly dense spike about 6 inches long. Native to southern Brazil.

89511. VRIESIA FULGIDA Duval.

A hybrid between *Vriesia duvaliana* and *V. incurvata,* distinguished by the brilliant red color of the flowers and the deep-green rosette of the leaves.

89512. VRIESIA HIEROGLYPHICA (Carr.) Morren.

A very showy vriesia with a dense rosette of 30 to 40 stout recurved leaves 2 or 3 feet long, green marked with very conspicuous broad irregular brown-purple transverse bands. The dull-yellow flowers are in a lax panicle over 2 feet long. Native to Brazil.

89513. VRIESIA INCURVATA Gaud.

With about a dozen plain-green thin flexible leaves a foot long, this vriesia has greenish-yellow flowers an inch long in a dense spike shorter than the leaves. The lower flower bracts are greenish yellow, the upper ones reddish yellow. Native to southern Brazil.

89514. VRIESIA PLATYNEMA Gaud. (*Encholirion roseum* Hort.).

A Brazilian epiphyte with 20 to 30 thin flexible green leaves up to 3 feet in length, purplish green below. The yellowish-green flowers, with bright-red bracts over an inch long, are in a lax spike up to 2 feet long.

89515. VRIESIA PSITTACINA Lindl.

The yellowish-green leaves of this species are 6 to 10 inches long, and the large flowers, yellow with green tips, are scattered along a distichous spike about as long as the leaves. The scape and rachis are bright red. The lower bracts are red and the upper ones yellow. Native to southern Brazil.

89516. VRIESIA REGINA (Vell.) Beer (*V. glazioviana* Lemaire).

A very large tillandsialike epiphyte. The plant is sometimes 8 to 10 feet high. The dense rosette is made up of 30 to 50 thin pale-green leaves 3 to 4 feet long. The white flowers, with narrow petals 2 to 3 inches long, are in a deltoid panicle 4 to 5 feet long. Native to southern Brazil.

89432 to 89530—Continued.

89517. VRIESIA REX L. Duval.

A hybrid between *Vriesia morrenabarilleti* and *V. cardinalis*. It is a very vigorous plant, developing large numbers of vivid carmine bracts.

89518. VRIESIA SAUNDERSII (Andre) Morren (*Encholirion saundersii*. Andre).

A Brazilian vriesia with a dense rosette of about 20 flexible recurved strap-shaped leaves a foot long, dull green above and copiously spotted with claret brown beneath. The yellow flowers with yellow bracts are in a lax panicle a foot long.

89519 and 89520. VRIESIA SPLENDENS (Brongn.) Lemaire.

89519. A plant with 12 to 30 leaves over a foot long, marked with distinct broad purplish-black, transverse bands, especially on the back. The pale-yellow flowers, with petals 2 inches long, are in a dense spike 6 to 12 inches long, with bright-red oblong-lanceolate bracts. Native to French Guiana.

89520. Variety *major*.

89521. VRIESIA TESSELLATA (Linden) Morren (*Tillandsia tessellata* Linden).

A tillandsialike epiphyte from southern Brazil, with 20 to 40 short, rather broad, stiff leaves, tessellated with yellow and green, and yellow flowers in a panicle over 3 feet long.

89522 to 89530.

The following were received under names for which places of publication and descriptions have not been found.

89522. BILLBERGIA NOBILIS Hort.

89523. CANISTRUM CAPPEI Hort.

89524. CRYPTANTHUS CANDIDUS Hort.

89525. CRYPTANTHUS PUMILUS Hort.

89526. HECHTIA MEXICANA Hort.

89527. NIDULARIUM ANGUSTINUM Hort.

89528. NIDULARIUM AUREO-STRIATUM Hort.

89529. NIDULARIUM LONGIFOLIUM PICTUM Hort.

89530. VRIESIA POELMANNI Hort.

89531 to 89542. SOLANUM spp. Solanaceae.

From Mexico. Tubers collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received October 16, 1930.

89531 to 89535. SOLANUM DEMISSUM Lindl.

89531. No. 29. *Papa silvestre.* From Rio Frio, Puebla, October 8, 1930. Tubers found growing in rich sandy loam in open woods at 9,000 feet altitude.

89532. No. 10. From El Desierto, Distrito Federal, October 6, 1930. No flowers or fruit seen.

89533. No. 40. From Rio Frio, Puebla, about a mile above the village, October 8, 1930. Smooth white tubers found on the dry bank of a ditch in open sandy loam. The oval fruit was smooth and green.

89534. No. 42. From Rio Frio, Puebla, October 8, 1930. A white tuber found in rich sandy loam in an open field at 9,000 feet altitude. Flowers not seen.

89535. No. 44. From Rio Frio, Puebla, October 8, 1930. A white tuber found in very rich soil at 9,000 feet altitude. The oval fruits were smooth and green.

89536 to 89542. SOLANUM spp.

89536. SOLANUM sp.

No. 9. From El Desierto, Distrito Federal, October 6, 1930. Tubers found growing in very rich soil under a large fir tree at 8,000 feet altitude.

89537. SOLANUM sp.

No. 11. From near Cuernavaca, Morelos, October 7, 1930. Seeds and tubers collected at 9,000 feet altitude. The flowers are white and perfectly smooth; the fruit is green with no spots nor streaks.

89538. SOLANUM sp.

No. 30. From above Rio Frio, Puebla, on the road from Mexico City to Puebla, October 8, 1930. A plant about a foot high with smooth green berries, somewhat laterally depressed, and small tubers; found at 9,000 feet altitude in rich sandy soil in open woods at the base of a large spruce.

89539. SOLANUM sp.

No. 31. *Papa.* From east of Rio Frio, Puebla, on the road from Mexico City to Puebla, October 8, 1930. A plant about 8 inches high with smooth green obconic fruits covered with whitish flecks, found at 9,000 feet altitude in rich sandy loam in open woods at the base of a large spruce.

89540. SOLANUM sp.

No. 38. From above Rio Frio, Puebla, at 9,000 feet altitude, October 8, 1930. A plant with pink flowers and white tubers, found in rich soil.

89541. SOLANUM sp.

No. 41. From Rio Frio, Puebla, October 8, 1930. A plant with green oval seed pods and large pink tubers, found at 9,000 feet altitude growing along a ditch bank in rich soil in an open field.

89542. SOLANUM sp.

No. 45. From Rio Frio, Puebla, October 8, 1930. Found growing in rich soil in an open field along a ditch. As the tubers were almost 2 inches in diameter, it is probably an escape from cultivation.

89543. PEPEROMIA sp. Piperaceae.

From Mexico. Plants collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received October 16, 1930.

From north of Cuernavaca, Morelos, October 7, 1930.

89544 to 89546. LUPINUS spp. Fabaceae. **Lupine.**

From Perth, Western Australia. Seeds presented by the Chapman Experiment Farm, Department of Agriculture. Received October 18, 1930.

89544. LUPINUS ANGUSTIFOLIUS L.

A narrow-leaved, blue-flowered lupine used for fodder.

89545. LUPINUS HIRSUTUS L. **European blue lupine.**

An ovate-leaved lupine used for forage and green manure.

For previous introduction see 81945.

89546. LUPINUS PILOSUS Murray.

A hairy annual 2 to 4 feet high, with compound leaves of 9 to 11 oblong-lanceolate leaflets and a raceme of rose-colored flowers arranged in whorls. It is native to southern Europe.

For previous introduction see 39198.

89547 to 89549. SOLANUM spp. Solanaceae.

From Lima, Peru. Seeds presented by M. E. Odriozolon, Chief, Estación Experimental Agrícola de La Molina. Received October 18, 1930.

89547. SOLANUM MURICATUM Ait. **Pepino.**

A plant indigenous to Peru, which is cultivated as far south as northern Chile. The sweet juicy fruits are highly prized among the natives. They are sold in the markets.

For previous introduction see 61434.

89548. SOLANUM QUITOENSE Lam. **Naranjilla.**

A shrub about 3 feet high of very good appearance. The wide plushy leaves are a fine iridescent green, and the purple flowers are comparatively large. The aromatic orange-colored fruits are nearly spherical and about 2 inches in diameter; they are used in the preparation of refreshing drinks. The plant is indigenous to the mountain regions of Peru.

For previous introduction see 52866.

89549. SOLANUM TORVUM Swartz.

A shrub about 10 feet high which grows wild in humid places or on the banks of rivers, isolated or forming heaths together with other shrubs. The stems are prickly, and the unarmed hairy leaves are 4 inches long and 6 inches wide. The white flowers occur in many-flowered racemes and are over 1 inch in diameter. The berries are small, smooth, and globose. The shrub is distributed throughout tropical America, the Philippines, China, and the Malay Archipelago.

For previous introduction see 43780.

89550 to 89584. SOLANUM spp. Solanaceae.

From Mexico. Tubers collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received in October and November, 1930.

Nos. 89550 to 89562 were collected October 13, 1930, in rich loam in the garden of the convent at 9,800 feet altitude in El Desierto, Distrito Federal.

89550 to 89584—Continued.

89550. SOLANUM sp.

No. 51, A and B. Apparently two kinds of plants are growing together. The fruits of one are solid green; those of the other are green spotted with small white specks. The white or purple tubers are on stolons, sometimes 3 feet long.

89551. SOLANUM sp.

No. 54. A plant with smooth green oval fruits having a slight lateral depression.

89552. SOLANUM sp.

No. 56.

89553. SOLANUM sp.

No. 58. A plant with smooth green oval to obconic fruits and white tubers which are irregularly oval.

89554 and 89555. SOLANUM spp.

These two plants were growing so closely together that it could not be determined which seeds and tubers belonged to the same plant as the tuber-bearing stolons were sometimes 3 feet long, and the plants were dead at the time the tubers were collected. The fruits of one plant were smooth, green, and globular; those of the other were smooth, green, obconic, with a slight lateral depression. Some of the tubers were white, others purple.

89554. SOLANUM sp.

No. 59–C.

89555. SOLANUM sp.

No. 59–D.

89556. SOLANUM sp.

No. 60. Small white tubers.

89557. SOLANUM sp.

No. 61. A tall plant with smooth, green, cordate fruit and marked with white specks and a lateral suture. The tubers are white. Found growing in dense shade.

89558. SOLANUM sp.

No. 62. A tall plant with smooth, green, cordate fruits marked with faint white specks and having a lateral suture. The oblong tubers are pale purple.

89559. SOLANUM sp.

No. 63. A plant with white oval tubers.

89560. SOLANUM sp.

No. 65. A low plant with very large purple flowers and white oval tubers.

89561. SOLANUM sp.

No. 66. A tall plant with pale purple tubers which are irregularly oval; found growing in dense shade at 10,000 feet altitude.

89562. SOLANUM sp.

No. 67. A plant with smooth, green, elliptic to obconic fruits marked with faint white specks and having a vertical suture. The oval tubers are white and smooth.

Nos. 89563 to 89569 were collected October 15, 1930, in rich loam along the roadside at El Vigia, Puebla, about 30 miles from Mexico City on the road to Puebla City, at 12,500 feet altitude.

89550 to 89584—Continued.

89563. SOLANUM sp.

No. 72. A plant 3 feet high, with white tubers.

89564. SOLANUM sp.

No. 73. A plant about 2 feet high, with purple flowers and white tubers.

89565. SOLANUM sp.

No. 74. A plant about 2 feet high, with oval to oblong white tubers.

89566. SOLANUM sp.

No. 76. A plant 3 feet high, with oval white tubers.

89567. SOLANUM sp.

No. 78. A plant 3 feet high, with purple flowers, white fruits, and white tubers.

89568. SOLANUM sp.

No. 80. A plant 3 feet high, with green fruit covered with very numerous small white warts and white tubers.

89569. SOLANUM sp.

No. 82. A plant with green fruits covered with very numerous small white warts and white tubers.

89570. SOLANUM sp.

No. 86. Collected near El Mirador, on the road between Mexico City and Puebla, at 12,000 feet altitude, October 15, 1930. A plant with white tubers found in rich soil.

89571. SOLANUM sp.

No. 87. Collected at El Caragon, on the road between Mexico City and Puebla, at 12,000 feet altitude, October 15, 1930. A plant 3 feet high, with green fruit, covered with very numerous small white warts, and white tubers.

89572. SOLANUM sp.

No. 90. Collected at El Mascaron, on the road between Mexico City and Puebla, at 12,000 feet altitude, October 15, 1930. A plant found in the rich loam in an open field with seed balls marked like *S. fendleri* and white tubers.

89573. SOLANUM sp.

No. 91. From El Polvorin, on the road to Puebla, at 12,000 feet altitude, October 15, 1930. A plant very much like No. 90 [89572], but the green fruit is not marked like *S. fendleri;* the tubers are white.

89574. SOLANUM sp.

No. 92. From El Mascaron, on the road between Mexico City and Puebla, at 12,000 feet altitude, October 15, 1930. A plant with white tubers.

89575. SOLANUM sp.

No. 54. From El Desierto, Distrito Federal. [Received without further notes.]

Nos. 89576 to 89582 were collected October 17, 1930, on the side of the mountain Pic de Xitle, Distrito Federal.

89576. SOLANUM sp.

No. 102. A plant with smooth green fruits having a slight vertical depression, also small white tubers; found under a pine tree in lava formation at 9,000 feet altitude.

89550 to 89584—Continued.

89577. SOLANUM sp.

No. 105. A plant with green fruit, marked with faint, darker green broad bands; collected halfway up the mountain side under a pine tree in lava rubble, at 8,500 feet altitude.

89578. SOLANUM sp.

No. 106. A plant with smooth green fruit and small white oval tubers; collected in lava rubble at 8,700 feet altitude.

89579. SOLANUM sp.

No. 107. A plant with smooth green oval fruit and white oval tubers; collected in lava rubble at 8,500 feet altitude.

89580. SOLANUM sp.

No. 108. A plant with green fruit of a uniform color and a slight vertical depression; tubers small and white; collected in lava rubble at 8,600 feet altitude.

89581. SOLANUM sp.

No. 116. A plant with smooth green fruit and purplish tubers; collected in the volcanic crater at 9,000 feet altitude.

89582. SOLANUM sp.

No. 118. A plant with round white tubers, collected in lava rubble at 9,000 feet altitude.

Nos. 89583 and 89584 were collected November 3, 1930, in the woods above the Trinidad mine at Real del Monte, Hidalgo, at 9,000 feet altitude.

89583. SOLANUM sp.

No. 221. A plant with round white tubers.

89584. SOLANUM sp.

No. 219. A plant with white tubers.

89585. ACACIA ADANSONII Guill. and Perr. Mimosaceae.

From Gambia, Africa. Seeds presented by the Department of Agriculture. Received November 13, 1930.

A much-branched tropical tree 30 to 40 feet high, with densely pubescent branchlets and bipinnate leaves of 4 to 6 pairs of pinnae each bearing 12 to 16 pairs of small linear-oblong leaflets. The yellow flowers are in heads and the undulate-margined thick brown pods, 5 to 6 inches long, are used for tanning. It is native to the Senegambia region of tropical Africa.

89586. CYCLAMEN AFRICANUM Boiss. and Reut. Primulaceae.

From Haarlem, Netherlands. Bulbs purchased from C. G. Van Tubergen (Ltd.). Received October 23, 1930.

A summer-blooming tuberous perennial with coarsely toothed kidney-shaped or heart-shaped leaves dull and pale green marbled above and nearly white, purple-tinged flowers an inch long. It is native to Algeria.

For previous introduction see 79186.

89587 and 89588.

From Belgian Congo, Africa. Seeds presented by A. Corbisier-Baland, Directeur, Jardin Botanique, D'Eala. Received October 23, 1930.

89587 and 89588—Continued.

89587. ALBIZZIA CORBISIERI Wildem. Mimosaceae.

A large handsome tropical tree, native to the Belgian Congo. The pinnate leaves are 4 to 6 inches long, and the flower clusters are usually in the axils of the upper leaves. The hard wood is used to make gongs and canoes.

89588. PITHECOLLOBIUM ALTISSIMUM (Hook. f.) Oliver. Mimosaceae.

A tall tree native to the Niger Valley in tropical Africa. The bipinnate leaves, 4 to 8 inches long, are made up of numerous linear-oblong leaflets less than half an inch long. The heads of small flowers are in racemose clusters and are followed by compressed, spirally contorted pods 8 to 10 inches long.

89589. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Oslo, Norway. Tubers presented by Karl A. Jensen. Received October 24, 1930.

Introduced for experimental purposes.

89590 to 89609.

From China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received October 23, 1930.

89590 and 89591. AMYGDALUS PERSICA PLATYCARPA (Decaisne) Ricker (*Prunus persica platycarpa* Bailey). Amygdalaceae. **Flat peach.**

For previous introduction see 63295.

89590. No. 7128. *Pan tao* (saucer or flat peach). From the market at Peiping, September 1, 1930, but said to have been grown near Wangchiayu, about 30 miles northeast of Peiping. The peaches are about 3 inches across and 1 inch thick; a few have a tinge of pink at the base and peak; both base and peak are slightly depressed. The fruit is quite fuzzy and greenish yellow as a base color; flesh creamy white with a tinge of red about the pit, very fragrant, juicy, and sweet and of excellent quality as compared with other peaches the explorers have eaten in China.

89591. No. 7148. Secured in the Eastern Market, Peiping, September 10, 1930, but said to have come from Huailai, above the Great Wall. The very large fruits are 3 inches in diameter and nearly 2 inches through, green to yellowish green in color, and blotched and tinted with red. The flesh is creamy white, firm, juicy, and of sweet flavor, very slightly tinted with red about the pit, but not of as good quality as No. 7128 [89590].

89592. ASPARAGUS DAURICUS Fischer. Convallariaceae.

No. 7103. Collected August 22, 1930, in the rocky compound of the Ming Tao Tomb. A wild ornamental asparagus with beautiful light-green foliage and straight stems 2 to 4 feet high. The Chinese boil the young shoots and use them as a vegetable.

For previous introduction see 36766.

89590 to 89609—Continued.

89593 and 89594. ASTRAGALUS MELILOTOIDES Pall. Fabaceae.

For previous introduction see 65294.

89593. No. 7164. Collected in the grounds of the Summer Palace, Peiping, September 12, 1930. "We have found the white variety less abundant and much later ripening than the yellow. The color of the flowers varies from white to more or less pink or lavender."

89594. No. 7227. From Nankou, September 19, 1930. Mixed seed of lavender and white flowered plants collected at the Yung Lo Ming Tomb.

89595 to 89598. MELILOTUS spp. Fabaceae. **Sweetclover.**

89595 to 89597. MELILOTUS OFFICINALIS (L.) Lam.

From Peiping, August 30, 1930.

89595. No. 7124. Seed from a single plant of the yellow-flowered sweetclover, found growing at the base of the steps of the Altar of Rain at the Temple of Agriculture.

89596. No. 7125. A yellow-flowered form about 4 feet high, growing in a crack in the flagstone paving of the Altar of Rain at the Temple of Agriculture.

89597. Collected from plants growing between flagstones of the Altar of Rain and the Altar of Snow at the Temple of Agriculture, and in the Temple of the Superior World near the Altar of the Temple of Heaven.

89598. MELILOTUS SUAVEOLENS Ledeb.

No. 7179. From Tangshan, China, September 15, 1930. Seed from plants up to 4 feet high, with yellow flowers which appear to be more abundant and perhaps a little larger than the one from which seed was collected in the Summer Palace grounds; the seed ripens fully three weeks later.

For previous introduction see 61320.

89599 to 89603. PHASEOLUS spp. Fabaceae.

89599 to 89601. PHASEOLUS AUREUS Roxb. **Mung bean.**

89599. No. 7180. From Tangshan, China, September 15, 1930. Possibly a wild form of the cultivated mung bean, found growing among grass and shrubby vegetation on dry rocky situations. It is perhaps an escaped cultivated variety, which, on account of conditions, appears smaller and of a slightly different color. Flowers not seen.

89600. No. 7216. From the Fa Hua Ssu Temple, September 18, 1930. A gray mung bean found in a field growing on decomposed granite in dry arid situations.

89601. No. 7217. From the Fa Hua Ssu Temple, September 18, 1930. A light-green mung bean collected in a field on a mountain side growing on decomposed granitic soil in dry arid situations.

89590 to 89609—Continued.

89602. PHASEOLUS CALCARATUS Roxb. Rice bean.

No. 7218. From the Fa Hua Ssu Temple, September 18, 1930. A small oblong green pole bean growing on decomposed granitic soil in dry arid situations in a field on a mountain side. The beans are ground into flour and used to make noodles.

89603. PHASEOLUS MINIMUS Roxb.

No. 7159. From Changli, China, September 7, 1930. A bean with yellow pea-shaped flowers and long narrow pods, found growing near the Shui Yen Ssu Temple in decomposed granitic soil.

89604. PINUS BUNGEANA Zucc. Pinaceae. Lacebark pine.

No. 7231. From Nankou, China, September 19, 1930. Collected from trees growing in the grounds of the Yung Ling Ming Tomb. This is the famed Chinese white-bark pine.

89605. QUERCUS DENTATA Thunb. Fagaceae. Daimyo oak.

No. 7169. From the Patachu, near Peiping, September 12, 1930. An oak with long leaves, narrow at the base and broad at the extremity. The cups sometimes extend over the acorn. Many plants from 18 inches to 3 feet high and well fruited were seen.

For previous introduction see 78659.

89606. QUERCUS VARIABILIS Blume. Fagaceae. Oriental oak.

No. 7168. From the Patachu (Western Hills), near Peiping, September 12, 1930. Attractive-looking trees which were bearing a large crop of acorns.

For previous introduction see 44669.

89607 to 89609. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

Some of the principal varieties grown in the Fa Hua Ssu Temple grounds, September 18, 1930.

89607. No. 7202. A red pea, found in decomposed granitic soil.

89608. No. 7200. A light and dark brown cowpea, found growing in decomposed granitic soil in a very dry situation.

89609. No. 7220. A creamy white and brown mottled cowpea. The mottling is lighter than No. 7200 [89608], and it may be a different variety; collected in a field on a mountain side in decomposed granitic soil in a very dry situation.

89610 to 89621. SOLANUM spp. Solanaceae.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received October 23, 1930.

Nos. 89610 to 89620 were collected at the convent in El Desierto, Distrito Federal, October 13, 1930, at 9,800 feet altitude.

89610. SOLANUM DEMISSUM Lindl.

No. 57. A smooth green obconic fruit with a slight lateral depression. No tubers were found.

89610 to 89621—Continued.

89611. SOLANUM sp.

No. 51–a. A plant with solid green seed balls. For introduction of tubers, see 89550.

89612. SOLANUM sp.

No. 51–b. A plant with green seed balls, spotted with white. For introduction of tubers, see 89550.

89613. SOLANUM sp.

No. 54. A plant with smooth green oval fruits having a slight lateral depression.

89614. SOLANUM sp.

No. 55. A plant with smooth green fruit spotted with white; no tubers found.

89615. SOLANUM sp.

No. 58. A plant with smooth green, oval to obconic fruits, and white tubers which are irregularly oval. Tubers introduced under 89553.

89616. SOLANUM sp.

No. 59. Apparently two kinds of plants growing so closely together that it could not be determined which seeds and tubers belong to the same plant, as the tuber-bearing stolons are sometimes 3 feet long, and the plants were dead at the time the seed and tubers were collected. The fruit of one plant is green, smooth, and globular; that of the other is smooth, green, obconic with slight lateral depression. Some of the tubers are white, others purple.

89617. SOLANUM sp.

No. 61. A tall plant found growing in dense shade, with smooth green cordate fruits with white specks and a lateral suture. Tubers of this number were introduced under 89557.

89618. SOLANUM sp.

No. 62. A tall plant with smooth green cordate fruits marked with faint white specks and having a lateral suture. The oblong tubers are pale purple. For introduction of tubers, see 89558.

89619. SOLANUM sp.

No. 67. A plant with smooth green elliptic to obconic fruits marked with faint white specks and having a vertical suture. The oval tubers are white and smooth. For introduction of tubers, see 89562.

89620. SOLANUM sp.

No. 68. A plant with smooth green obconic fruits marked with faint white specks and with a vertical suture.

89621. SOLANUM sp.

No. 218. From Oaxaca, Mexico. A woody vine with edible red fruits, called a tomato, collected in Mr. Conzatti's garden.

89622. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. Peach.

From the Union of Soviet Socialist Republics. Seeds presented by Vale Lichagov, Lochi, Chernomorsh. Received October 24, 1930.

A handsome late freestone peach which comes true from seed. It is large to very

89622—Continued.

large, oval and pointed; the skin is greenish or yellowish white marked with red, and the flesh is firm, greenish or creamy white stained carmine red at the pit. The peach is a good shipper, very prolific, and ripens near Lochi the first part of September.

89623. SELENICEREUS CONIFLORUS (Weingart) Britt. and Rose. Cactaceae.

From Mexico. Cuttings purchased from Dr. C. A. Purpus, Zacuapam, Huatusco, Vera Cruz. Received October 27, 1930.

A night-blooming cactus with high-climbing, pale-green stems having five to six low, purplish ribs and pale-yellow spines. The globular flower buds, covered with white hairs, develop into flowers 8 to 10 inches long, with the outer segments bronze to lemon yellow and the inner segments pure white. It is native to Mexico.

89624. FRAGARIA sp. Rosaceae. **Strawberry.**

From Long Ashton, England. Plants collected by E. C. Auchter, Bureau of Plant Industry. Received October 27, 1930.

A strain of the Royal Sovereign strawberry.

89625. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Sanaa, Yemen, Arabia. Seeds presented by Dr. K. S. Twitchell (forwarded from Burlington, Vt.). Received October 27, 1930.

A small fruit of good flavor, grown at 7,500 feet altitude.

89626. PENNISETUM PURPUREUM Schumach. Poaceae. **Napier grass.**

From Northern Rhodesia. Seeds presented by J. Burtt-Davy, University of Oxford, England. Received October 27, 1930.

Banga reed. From the Minga River, between 3,500 and 4,000 feet altitude. A grass which grows on river banks in alluvial soil and is used extensively for mat and basket making. It is also an excellent fodder grass for somewhat dry hot regions with cold nights and some slight frost.

89627 to 89640. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Spain. Seeds collected by H. L. Westover, Bureau of Plant Industry. Received October 28, 1930.

89627. No. 240. Wild alfalfa collected along the roadside near Balaguer, Spain, October 9, 1930.

89628. No. 234. Produced at Lerida, but purchased from Nonell in Barcelona.

89629. No. 238. Grown in the Province of Murcia, but purchased from G. Truffant in Barcelona.

89630. No. 233. Purchased in the seed market at Castellon; grown in the Province of Valencia.

89631. No. 235. Purchased in the market at Castellon; grown at Albaida, Spain.

89627 to 89640—Continued.

89632. No. 236. Purchased in the market at Castellon; grown in the Province of Valencia.

89633. No. 230. From near Cervera, October 8, 1930. Wild alfalfa collected along the roadside.

89634. No. 237. From near Cervera, October 8, 1930. Cultivated alfalfa, collected from the border of a field.

89635. No. 229. October 8, 1930. Cultivated alfalfa purchased in the market at Lerida. Local production.

89636. No. 232. Locally grown seed, purchased in the market at Lerida, October 8, 1930.

89637. No. 241. Wild alfalfa collected along the roadside northeast of Lerida.

89638. No. 243. Wild alfalfa collected along the roadside near Turiana, October 9, 1930.

89639. No. 231. Seed purchased from a dealer at Vich but grown at Mollerusa, about 15 miles south of Lerida.

89640. No. 242. From near Vich, October 9, 1930. Wild alfalfa collected along the roadside.

89641 and 89642.

From San Pedro Sula, Honduras. Seeds presented by Miss Soledad Fernandez Cruz. Received October 28, 1930.

89641. HORDEUM VULGARE COELESTE L. Poaceae. **Six-rowed barley.**

89642. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

89643 to 89646. CYRTANTHUS spp. Amaryllidaceae.

From Haarlem, Netherlands. Bulbs purchased from C. C. Van Tubergen (Ltd.), Zwanenburg Nurseries. Received November 1, 1930.

A collection of bulbous perennials, native to southern Africa.

89643. CYRTANTHUS ANGUSTIFOLIUS (L. f.) Ait.

A plant with two or three narrowly linear flaccid leaves 12 to 18 inches long and a stalk about the same height, bearing an umbel of 4 to 10 bright-red tubular flowers 1 to 2 inches long.

89644. CYRTANTHUS LUTESCENS Herbert.

The two to four linear green flaccid leaves 1 foot long appear with or after the flowers, which are tubular, yellowish, 2 inches long, and in umbels of two to three.

89645. CYRTANTHUS MACKENII Hook. f.

A plant with two to six linear leaves 1 foot long. They appear with the flower stem, which is 1 foot high, red-brown at the base, and bears an umbel of 4 to 10 pure-white tubular flowers 2 inches long.

89646. CYRTANTHUS PARVIFLORUS Baker.

A plant with several linear flaccid leaves about 1 foot long and a flower stem 6 to 12 inches high, bearing an umbel of six to eight bright-red tubular flowers 1 inch or more long.

89647 to 89653. SOLANUM spp. Solanaceae.

From Mexico. Tubers collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 6, 1930.

89647. SOLANUM sp.

No. 193. Collected along the roadside about 30 miles from Mexico City, October 28, 1930, at 10,000 feet altitude. A plant with nearly white fruits, some of which show spots of green near the base, and white kidney-shaped tubers.

Nos. 89648 to 89653 were collected near Tres Marias, Morelos, October 29, 1930, at 10,000 feet altitude, about 35 miles from Mexico City, Distrito Federal.

89648. SOLANUM sp.

No. 207.

89649. SOLANUM sp.

No. 208. A plant with white oval tubers.

89650. SOLANUM sp.

No. 209. A small plant 4 to 8 inches high found in rich loam under a pine tree. The white tubers are oval.

89651. SOLANUM sp.

No. 211. A plant with white oval tubers found in rich loam under a pine tree.

89652. SOLANUM sp.

No. 212. A plant with white oval tubers collected west of Tres Marias on the road to Cuernavaca.

89653. SOLANUM sp.

No. 214. A plant with white oval tubers, found in loam under a pine tree.

89654 to 89673.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 5, 1930.

89654. LUPINUS sp. Fabaceae. **Lupine.**

No. 121. From Pic de Xitle, Distrito Federal, October 17, 1930. A small plant collected at 9,000 feet altitude, in lava rubble.

Nos. 89655 to 89658 were collected on the Puebla Road, between the City of Mexico and the city of Puebla, October 15, 1930.

89655. PHASEOLUS CARACALLA L. Fabaceae. **Snail bean.**

No. 88. From El Mirador, about 25 miles from the City of Mexico. A vine with red flowers found at 10,000 feet altitude in the rich soil along the roadside.

For previous introduction see 73253.

89656 to 89672. SOLANUM spp. Solanaceae.

89656. SOLANUM sp.

No. 22. [Received without notes.]

89657. SOLANUM sp.

No. 92. From El Mascaron, at 12,000 feet altitude. A plant with white tubers.

89654 to 89673—Continued.

89658. SOLANUM sp.

No. 114. [Received without notes.]

89659. SOLANUM sp.

No. 105. For introduction of tubers and description, see 89577.

89660. SOLANUM sp.

No. 106. For introduction of tubers and description, see 89578.

89661. SOLANUM sp.

No. 107. For introduction of tubers and description, see 89579.

89662. SOLANUM sp.

No. 90. For introduction of tubers and description, see 89572.

89663. SOLANUM sp.

No. 87. For introduction of tubers and description, see 89571.

89664. SOLANUM sp.

No. 91. For introduction of tubers and description, see 89573.

89665. SOLANUM sp.

No. 93. Collected at El Polvorin, Distrito Federal, about 25 miles from the City of Mexico, on the Puebla Road at 11,800 feet altitude, October 15, 1930. A plant with green fruits that have dark-red markings.

89666. SOLANUM sp.

No. 79. Collected at El Vigia, Puebla, about 40 miles from the City of Mexico on the road to Puebla, at 12,200 feet altitude, October 15, 1930. A plant 8 to 12 inches high, with green fruits, thickly covered with small white warts; found in dry soil along the roadside.

89667. SOLANUM sp.

No. 80. For introduction of tubers and description, see 89568.

89668. SOLANUM sp.

No. 82. For introduction of tubers and description, see 89569.

89669. SOLANUM sp.

No. 158. Collected near Jalapa, Vera Cruz, at 5,300 feet altitude, October 22, 1930. A spiny bush, about 3 feet high, found along the railroad.

89670. SOLANUM sp.

No. 108. For introduction of tubers and description, see 89680.

89671. SOLANUM sp.

No. 102. For introduction of tubers and description, see 89576.

89672. SOLANUM sp.

No. 116. For introduction of tubers and description, see 89581.

89673. SYMPHORICARPOS MICROPHYLLUS H. B. K. Caprifoliaceae. **Pink snowberry.**

No. 100. Collected at El Vigia, Puebla, October 15, 1930. A bush 3 to 5 feet high, with attractive pinkish flowers and white translucent fruit. A very common plant found along the roadside at 12,500 feet altitude.

89674 to 89677.

From Gladwyne, Pa. Plants presented by Mrs. J. Norman Henry. Received November 5, 1930.

89674. BEGONIA CATHCARTII Hook. f. Begoniaceae.

A begonia with a creeping rhizome, decumbent stems covered with deflexed brown hairs, and sharp-pointed cordate leaves 2 to 5 inches long. The axillary few-flowered peduncles, 3 inches long, bear clusters of showy butter-yellow flowers. It is native to the Himalayas of northeastern India.

89675. BIGNONIA sp. Bignoniaceae. **Trumpetcreeper.**

Grown from seed received from Yucatan.

89676. LONICERA RUPICOLA Hook. f. and Thoms. Caprifoliaceae. **Honeysuckle.**

A rigid shrub 2 to 4 feet high, with pubescent branchlets, oblong leaves half an inch long, and pale-purple flowers one-quarter of an inch long. It is native to Tibet.

89677. RHAMNUS RUPESTRIS Scop. Rhamnaceae. **Buckthorn.**

A low-spreading shrub 2 to 3 feet high, with hairy branchlets, ovate to orbicular dull-green leaves 1 to 2 inches long, and umbels of inconspicuous flowers followed by top-shaded fruits a quarter of an inch across, first red then black. It is native to the mountains of southeastern Europe.

For previous introduction see 66306.

89678. ALOE VAOMBE Decorse. Liliaceae.

From Madagascar. Seeds presented by Rev. Andrew Burgess, Behara, through C. F. Swingle, Bureau of Plant Industry. Received November 5, 1930.

A large fleshy plant, native to sandy places in southwestern Madagascar. It becomes about 25 feet high with incurved reddish spiny leaves 4 feet long and reddish-orange flowers in an erect head of 50 to 70 flowers.

For previous introduction see 77888.

89679 to 89685.

From the Mediterranean region. Seeds collected by Knowles A. Ryerson, agricultural explorer, Bureau of Plant Industry. Received November 5, 1930.

89679 to 89684. PISTACIA VERA L. Anacardiaceae. **Pistache.**

Collected in the Sfax district, Tunisia, Africa.

89679. No. 1.

89680. No. 2.

89681. No. 3.

89682. No. 4.

89683. Mixed nuts.

89684. Collected in Sicily.

89685. (Undetermined.)

From San Remo, Italy. A spreading ornamental evergreen tree about 8 feet high, which grows under very dry conditions.

89686 to 89692. SOLANUM spp.

From Mexico. Tubers collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 18, 1930.

Nos. 89686 and 89687 were collected on a mountain about 2 miles southeast of Amecameca, State of Mexico, November 10, 1930, at 8,000 feet altitude.

89686. SOLANUM sp.

No. 312. A small plant 4 to 6 inches high, with few white tubers, found in rich loam in pine woods.

89687. SOLANUM sp.

No. 310. A plant with nearly spherical green fruits, marked with purplish bands or streaks, and white oval tubers; found in pine woods.

Nos. 89688 and 89689 were collected on Cerro de San Miguel, El Desierto, Distrito Federal, November 5, 1930.

89688. SOLANUM sp.

No. 258. A plant with white tubers, found under a spruce tree.

89689. SOLANUM sp.

No. 261. A plant with smooth green fruits which have a vertical depression and tubers which are both pink and white.

Nos. 89690 to 89692 were collected over a mile above the convent in El Desierto, Distrito Federal, November 5, 1930.

89690. SOLANUM sp.

No. 262. A plant with round to oval white tubers, found in pine humus.

89691. SOLANUM sp.

No. 263. A plant with oblong purplish tubers, found under a pine tree.

89692. SOLANUM sp.

No. 264. A plant with large oblong white tubers, found under a pine tree in rich loam and humus.

89693. STRYCHNOS MITIS S. Moore. Loganiaceae.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received November 8, 1930.

A tall tree with oblong-lanceolate coriaceous leaves 2 to 4 inches long and axillary cymes of small creamy yellow flowers followed by yellow fruits about half an inch long. It is native to tropical Africa.

89694 to 89698.

From China. Tubers and seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received November 7, 1930.

89694. IPOMOEA BATATAS (L.) Poir. Convolvulaceae. **Sweetpotato.**

No. 7327. From Peiping, Chihli Province, October 6, 1930. Tubers of a pink-skinned variety. Sweetpotatoes are very much liked by the Chinese and are eaten both boiled and baked.

89695 to 89698. QUERCUS spp. Fagaceae. **Oak.**

89694 to 89698—Continued.

89695. QUERCUS MONGOLICA Fisch.
Mongolian oak.

No. 7181. From the Fa Hua Ssu Temple, September 16, 1930. Seeds of a handsome oak which becomes 100 feet tall. The short-stemmed, dark-green, coarsely toothed, fairly broad leaves, 6 to 8 inches long, are crowded toward the ends of the twigs.

For previous introduction see 85025.

89696. QUERCUS DENTATA Thunb.
Daimyo oak.

No. 7196. Collected September 17, 1930, in the mountains west of Fa Hua Ssu Temple.

For previous introduction and description see 89605.

89697. QUERCUS DENTATA Thunb.
Daimyo oak.

No. 7229. From Nankou, September 19, 1930. Acorns of broad-leaved oaks from trees growing in abundance at Changling (Yung Lo Ming Tomb). A most beautiful oak with large shining green leaves which in the fall turn to warm red hues. It is a slow grower, but well worth while.

89698. QUERCUS ACUTISSIMA Carruthers.
Bristletooth oak.

No. 7230. From the Yung Ling Ming Tomb, Nankou, September 19, 1930. Acorns from two young trees with narrow, attractive, bright-green leaves. The cups and acorns of this narrow-leaved oak are quite different from those at the Fa Hua Ssu Temple or on the hills at Patachu, from both of which places seed has been secured.

89699 to 89719.

From Chiddingfold, Surrey, England. Plants purchased from V. N. Gauntlett & Co. (Ltd.). Received November 7, 1930.

89699. ARUNDINARIA ANCEPS Mitf. Poaceae.
Bamboo.

The botanical name of this attractive bamboo means the doubtful arundinaria, referring to an uncertainty as to its origin. It is now believed to have come from northeastern India. The culms are round and slender and are reported to grow 10 to 15 feet high in England. On small plants there are two or three branches at each node, with rather long branchlets, having 8 to 10 linear-lanceolate leaves. The leaves are light green and up to 3¼ inches by ⅜ inch in size. The auricular hairs on the leaf sheaths, although not conspicuous, are unusually persistent. The secondary veins are three or four on each side of the midrib, with four to seven intermediates between. The tessellation (cross venation) is minute and unusually regular.

89700. ARUNDINARIA HINDSII GRAMINEA Mitf. Poaceae.
Bamboo.

This variety of *Arundinaria hindsii* does not grow so tall as the type, but will probably reach 8 feet or more. The dark-green leaves are very narrow, and small ones often have only one or two pairs of secondary veins. There are three to four intermediate veins. The leaves may reach a length of 9 inches with a width of one-half inch.

89699 to 89719—Continued.

89701. PHYLLOSTACHYS BAMBUSOIDES CASTILLONI (Marl.) H. de Lehaie. Poaceae.
Castillon bamboo.

A smaller and more slender Japanese form of *Phyllostachys bambusoides* with yellow stems striped with green and the shorter and narrower leaves often striped with yellow. It grows to a height of 35 feet or more. As in the type, the rhizomes are vigorous and spread rapidly.

For previous introduction see 75155.

89702 to 89704. ARUNDINARIA spp. Poaceae.
Bamboo.

89702. ARUNDINARIA MURIELAE Gamble.

A handsome bamboo understood to grow to a height or 10 to 15 feet. It is reported to produce dense masses of culms, which is unusual for hardy bamboos. The culms turn to a rich yellow with age, and there are one to many branches at the nodes. On small plants the branches bear two to three leaves up to 2¾ inches long by $\frac{1}{5}$ of an inch wide. There are usually three pairs of secondary veins, and the intermediates are five to eight. The tessellation is rather close.

89703. ARUNDINARIA NEPALENSIS Hort.

A small plant of this bamboo has six to seven leaves on a branch. The leaves are up to 3 inches long by ⅜ of an inch wide and rather thin. There are two to three secondary veins, and five to six intermediates. The cross veinlets are unusually far apart.

89704. ARUNDINARIA NITIA Mitf.

The plant received under this name does not agree well with the original description. The most striking point of difference is that in the plant received the secondary veins, of which there are three pairs, are prominent instead of being nearly indistinguishable from the intermediates. There are six of the latter. The leaves are light green, four to six on a branch, and, in size, up to 2¼ by ⅜ inch. The tessellation is close and regular. The culm sheaths are rather persistent. The species is reported to reach a height of 15 feet in England. It prefers shade.

For previous introduction see 75150.

89705. SASA VEITCHII (Carr.) Rehder. Poaceae.
Bamboo.

Received as *Arundinaria senanensis*. The description and illustration of this bamboo in the catalogue of Gauntlett & Co. agree with those elsewhere of *Sasa veitchii*. Some authorities have believed *Arundinaria* (*Sasa*) *senanensis* to be the same as *S. veitchii*, but others consider them to be distinct species. On a greenhouse plant 10 inches high the leaves are up to 4 by 1⅛ inches and there are five to seven pairs of secondary veins with about seven intermediates. The decayed or whitish margins which are characteristic of *S. veitchii* do not appear on this greenhouse specimen.

89706. ARUNDINARIA SPATHIFLORA Trin. Poaceae.
Bamboo.

A bamboo native to the northwestern Himalayas, said to grow 20 to 25 feet high. In England it has reached 10 feet. The small plant received has only three or four branches at each node, but mature plants are stated to have many branches. The thin delicate leaves are

89699 to 89719—Continued.

three to six on a branch and range in size up to 3 inches long by $\frac{7}{16}$ inch wide. The midrib and secondary veins are inconspicuous. There are three pairs of the latter and five to seven intermediate veins between. The tessellation is rather close and regular. In its native habitat the species is said to occur as undergrowth in coniferous forests, and it is inferred that it will prefer partial shade.

89707. ARUNDINARIA sp. Poaceae. Bamboo.

Received as *Bambusa angustifolia.* On a plant 26 inches high in the greenhouse, the rather narrow leaves are six to eight on a branch and are from less than one-fourth to three-eighths of an inch wide and up to 2¾ inches long. The leaves are medium green and usually are one-half to 1 inch apart except near the end of the branch, where they are very close and are distinctly two-ranked. There are two to three pairs of secondary veins which are not very prominent; the intermediates are four to five in number. The plants reach a height of 6 to 8 feet in England.

89708. SASA DISTICHA (Mitf.) E. G. Camus. Poaceae. Bamboo.

Received as *Bambusa disticha.* A small compact-growing bamboo, originally from Japan. The small plant received has usually one branch to a node, with 8 to 16 brilliant medium-green leaves crowded on a branch. The leaves are up to 2½ inches long by ½ inch wide, with four pairs of secondary veins and about five intermediate veins. The tessellation is somewhat irregular.

89709. ARUNDINARIA sp. Poaceae. Bamboo.

Received as *Bambusa laydeckeri.* A bamboo believed to reach a height of over 6 feet. The dark-green oblong-lanceolate leaves are up to 6 inches long by ¾ inch wide and are six to seven in number on branches with long internodes. There are four to five pairs of secondary veins and the intermediates are five to six. The plant is not so ornamental as many other bamboos and is said to have a rampant rhizome.

89710. ARUNDINARIA MARMOREA (Mitf.) Makino. Poaceae. Bamboo.

Received as *Bambusa marmorea.* The small plant received flowered in the greenhouse late in November, 1930. Flowers appeared on nearly every one of the little culms and all but one of the latter died. The plant has four to six light-green leaves, somewhat crowded on each branch, and the largest are 1½ inches long by $\frac{5}{16}$ inch wide. There are three pairs of secondary veins and five to six intermediates.

89711 to 89713. BAMBUSA spp. Poaceae. Bamboo.

89711. BAMBUSA sp.

Received as *Arundinaria falcata.* On a small plant of this bamboo, grown in the greenhouse, there are six leaves on a branch. They are up to 1¼ inches long by $\frac{5}{16}$ inch wide and are nontessellated. The secondary veins are two to three on each side of the midrib and are very inconspicuous; the intermediates are five to six. In England the species has attained a height of 10 feet. It is said to be very hardy.

89699 to 89719—Continued.

89712. BAMBUSA sp.

Received as *Arundinaria gracilis.* A greenhouse-grown plant with culms cut back, bears 10 to 15 branches at each node. The thin, light-green nontessellated leaves are five to seven on a branch and are up to 3⅓ inches long by $\frac{7}{16}$ inch wide. The secondary veins are two to three and the intermediates five in number. The culms grow 6 to 8 feet high in England.

89713. BAMBUSA sp.

Received as *Arundinaria nobilis.* This is said to be a very handsome bamboo and to have reached a height of 30 feet in the warmest parts of England. A plant in the greenhouse has a flexuous 6-foot culm one-fourth inch in diameter. There are 10 to 13 branches at a node. The leaves are up to 2¾ inches long and ½ inch wide. The inconspicuous secondary veins are three on each side of the midrib and the intermediates five to seven. The species is hardy only in mild-wintered regions. It is said by Mitford to have held its leaves through 8° F. of frost.

89714 to 89719. PHYLLOSTACHYS spp. Poaceae. Bamboo.

89714. PHYLLOSTACHYS BAMBUSOIDES MARLIACEA (Mitf.) H. de Lehaie. Wrinkled bamboo.

Received as *Phyllostachys marliacea.* This variety of the timber bamboo is said to be indistinguishable from the type except by the wrinkled basal part of the culm. The maximum height which may be attained is not known. The Japanese name of the variety, *Shibo-chiku,* means wrinkled bamboo.

89715. PHYLLOSTACHYS FLEXUOSA A. and C. Riviere.

This bamboo is described as of neat and compact habit, with two branches at each node. Its greatest height is said to be 10 feet. The slightly zigzagged culms are at first green but change to a bright yellow. The leaves on the small plant received are 8 to 14 on a branch and are up to 3 inches long by more than half an inch in width. There are four to six pairs of secondary veins and five to seven intermediate ones.

For previous introduction see 75156.

89716. PHYLLOSTACHYS KUMASASA (Zoll.) Munro (*P. ruscifolia* Nicholson). Bamboo.

Received as *Phyllostachys ruscifolia.* This is a dwarf bamboo believed to grow only 2 to 3 feet high. It bears two to five very short branches at a node and is the only known phyllostachys having more than three branches at a node. On the small plant received, each branch bears 8 to 10 leaves which range in size from ¾ inch to 1¾ inches long by $\frac{3}{16}$ to $\frac{5}{8}$ inch wide. They are reported to grow larger. There are three to five pairs of secondary veins and four to eight intermediates. The tesselation is rather close. Both edges of the leaf are serrate, and the lower surface is finely pubescent.

For previous introduction see 75157.

89699 to 89719—Continued.

89717. PHYLLOSTACHYS PUBERULA NIGRA-PUNCTATA H. de Lehaie.

Received as *Phyllostachys nigra punctata*. This bamboo grows over 15 feet high, the culms changing from olive green to a speckled black in the second year. Three branches, one much larger than the other two, are borne at each node. The leaves, up to 2¼ inches long by ½ inch wide, are 6 to 14 on a branch. There are three to five pairs of secondary veins and five to nine intermediate ones. The foliage, color of culm, and general habit of the plant make it a handsome bamboo. It may be added that the culm of the plant received changed to practically solid black instead of speckled.

89718. PHYLLOSTACHYS SULFUREA (Carr.) A. and C. Riviere.

On the small plant received there are 10 to 12 leaves on a branch, and the largest leaf is 2¾ inches long by $\frac{2}{16}$ inch wide. There are three to five pairs of secondary veins and five to eight intermediates. The tessellation is normal. In England the culms are said to reach a height of 20 feet and to be somewhat golden, with a fine line of vivid green.

89719. PHYLLOSTACHYS VIOLASCENS A. and C. Riviere.

This bamboo is said to reach a height of 13 feet in England. The young culms are violet but change to brown the second year. On the small plant received, there are two to three branches at a node and 6 to 10 leaves, dark green above, on a branch. The leaves are 2½ to 4 inches long and $\frac{5}{16}$ to ¾ inch wide. There are three to six pairs of secondary veins and five to nine intermediates. The auricular hairs are unusually persistent.

For previous introduction see 7824.

89720 to 89793.

From China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received November 7, 1930.

89720. ABELMOSCHUS MANIHOT (L.) Medic. (*Hibiscus manihot* L.). Malvaceae.

No. 7133. From the Botanical Garden, outside of Peiping, September 2, 1930. The white flowers are over 6 inches across and quite ornamental. The fruit is good but mealy.

For previous introduction see 76892.

89721. AESCHYNOMENE INDICA L. Fabaceae.

No. 7143. From near the Kuan Yiu Miao Temple, Changli, China, September 6, 1930. An interesting sensitive beggarweedlike plant over 3 feet high, found on poor, clayey, gravelly, decomposed granitic soil.

For previous introduction see 82103.

89722. ASPARAGUS sp. Convallariaceae.

No. 7251. From Chinglungchiao, September 21, 1930. A wild asparagus collected near the Great Wall. It is an open-growing variety and was found on a rocky mountain side on the north exposure.

89720 to 89793—Continued.

89723 to 89727. ASTRAGALUS spp. Fabaceae. **Milkvetch.**

89723. ASTRAGALUS ADSURGENS Pall.

No. 7238. From Chinglungchiao, September 20, 1930. A decumbent astragalus, collected on the Great Wall, and found there primarily. This may prove of value as a cover or green-manure crop on poor soils and in exposed positions.

For previous introduction see 21636.

89724. ASTRAGALUS DAVURICUS (Pall.) DC.

No. 7172. From Peiping, September 11, 1930. A plant 3 to 5 feet high which seeds profusely; collected in the grounds of the Temple of Heaven.

89725 and 89726. ASTRAGALUS MELILOTOIDES Pall.

For previous introduction see 65294.

89725. No. 7247. From Chinglungchiao, September 20, 1930. A white-flowered type, collected on the mountain side near the Great Wall, growing in a dry rocky situation.

89726. No. 7255. From Chinglungchiao, September 21, 1930. A white-flowered type which is inclined to be shrubby, and, judging from the base of the stem, it is a perennial which, if cut or broken, would readily grow new shoots. The upper side of the leaves is dark green, the under side has a silvery tinge; the seed pods are larger than any other we have seen.

89727. ASTRAGALUS sp.

No. 7178. From Langshan, September 15, 1930. A plant with purple pea-shaped flowers and flattened pods with the keel and hinge on the back.

89728. BEGONIA sp. Begoniaceae.

No. 7293. Collected near the Chieh Tai Ssu Temple, September 28, 1930, in the mountains.

89729. CAMPANULA sp. Campanulaceae. **Bellflower.**

No. 7244. From Chinglungchiao, September 20, 1930, near the Great Wall. A plant with small bell-shaped blue flowers which are produced abundantly over a long flowering season. It is well worthy of trial in the herbaceous border and also in rock gardens.

89730. CASSIA MIMOSOIDES L. Caesalpiniaceae.

No. 7167. From near Peiping, Chihli Province, September 12, 1930. A sensitive plant with pea-shaped flowers, collected at Patachu, Western Hills, from dry rocky situations.

89731. CELASTRUS ARTICULATUS Thunb. Celastraceae. **Oriental bittersweet.**

No. 7206. Near Fa Hua Ssu Temple, September 17, 1930. A shrub with round yellow fruits, found growing on the mountain sides on decomposed granitic soil in very dry situations.

For previous introduction see 82507.

89732 to 89734. CLEMATIS spp. Ranunculaceae.

89720 to 89793—Continued.

89732 and 89733. CLEMATIS ORIENTALIS L. Oriental clematis.

From Chinglungchiao, September 20, 1930.

For previous introduction see 53040.

89732. No. 7239. A vine with very finely cut leaves, found in abundance near the Great Wall. The seeds are borne in terminal clusters, each seed having a fluffy or featherlike appendage.

89733. No. 7240. A vine very much like the preceding number, except that the leaves are not so finely cut.

89734. CLEMATIS sp.

No. 7265. From Patachu, near the Chieh Tai Ssu Temple, September 27, 1930. A vine with leaves not so finely cut as No. 7239 [89732].

89735. CROTALARIA sp. Fabaceae.

No. 7242. From Chinglungchiao, September 20, 1930. A vine found on the mountain side growing over piles of rock and bush. It may prove of value as a cover crop or as a green manure.

89736. FEDIA SCABIOSAEFOLIA (Fisch.) Trev. Valerianaceae.

No. 7253. (Herbarium specimen No. 5546.) From Chinglungchiao, September 26, 1930. An attractive plant with flower heads 3 to 4 inches across, made up of small bright-yellow flowers. Found growing quite abundantly in dry rocky situations.

For previous introduction see 26431.

89737. GLEDITSIA HETEROPHYLLA Bunge. Caesalpiniaceae. Honeylocust.

No. 7294. From Chieh Tai Ssu Temple, September 28, 1930. A rather tall growing, very thorny, small-leaved shrub with pods less than an inch wide and over 2 inches long. This may prove interesting as an ornamental or as a hedge plant.

89738. GOSSYPIUM sp. Malvaceae. Cotton.

No. 7266. From near the Chieh Tai Ssu Temple, September 27, 1930. A native cotton, collected in a valley field, en route from Patachu to the Chieh Tai Ssu Temple.

89739. JUGLANS MANDSHURICA Maxim. Juglandaceae.

No. 7285. From the Chieh Tai Ssu Temple, September 27, 1930. Nuts collected from trees growing in the temple grounds. They are smaller, on an average, than the nuts collected in Manchuria on the Dorsett and Dorsett expedition in 1925–26. These small-sized nuts are polished and used as rosaries or beads by the priests of the temple. When polished they are really quite handsome.

89740 to 89747. LESPEDEZA spp. Fabaceae. Bushclover.

89740 to 89742. LESPEDEZA DAURICA (Laxm.) Schindler.

For previous introduction see 65493.

89740. No. 7197. From the Fa Hua Ssu Temple, September 17, 1930. A plant growing on a mountain side south of the temple in dry arid situations on poor granitic soil. The leaves are long and narrow, the center leaf being longer than the two side ones. The plant is quite abundant and seeds well.

89741. No. 7232. From near Nankou, September 19, 1930. A small-leaved creeping lespedeza growing on very poor thin soil in extremely dry situations along the fields and trails north of Nankou.

89742. No. 7259. From Peiping, September 24, 1930. A shrubby plant over 4 feet tall, collected in the grounds of Coal Hill.

89743. LESPEDEZA JUNCEA Pers.

No. 7233. From Chinglungchiao, September 20, 1930. A rather tall, more or less shrubby, much-branched species, with white flowers and very narrow but fairly long leaves. This plant may possibly be of value for green manure or forage purposes; it may also prove of value as a small ornamental flowering shrub.

For previous introduction see 62327.

89744. LESPEDEZA STRIATA (Thunb.) Hook. and Arn.

No. 7234. From Chinglungchiao, September 20, 1930. A very low-growing species found on a rocky mountain side near the Great Wall.

89745. LESPEDEZA TOMENTOSA (Thunb.) Sieb.

No. 7123. From the Temple of Heaven, Peiping, August 20, 1930. A rather tall coarse herbaceous plant which appears to flower and seed quite freely.

89746. LESPEDEZA sp.

No. 7171. From the Temple of Heaven grounds, Peiping, September 11, 1930. A rather coarse tall-growing plant, with a rather heavy herbaceous stem, which seeds abundantly.

89747. LESPEDEZA sp.

No. 7256. From Chinglungchiao, September 21, 1930. A shrubby plant with small short leaves, found growing on very dry rocky soil in an exposed position on the mountain side near the Great Wall. Only one plant was found.

89748. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

No. 7261. From Peiping, September 24, 1930. Plants found growing in a paved court in the grounds of Coal Hill, in a good-sized patch, but not much seed was found.

89749. MELILOTUS sp. Fabaceae. Sweetclover.

No. 7246. From Chinglungchiao, September 20, 1930. A yellow-flowered species found in dry rocky situations on the mountain side, near the Great Wall.

89750. MENISPERMUM DAURICUM DC. Menispermaceae. Asiatic moonseed.

No. 7222. From near the Fa Hua Ssu Temple, September 18, 1930. An ornamental vine found on the mountain side, growing in decomposed granitic soil in dry, arid situations.

89720 to 89793—Continued.

89751. ORYZA SATIVA L. Poaceae. **Rice.**

No. 7272. From near the Chieh Tai Ssu Temple, September 27, 1930. The plants were about 20 inches high, in an unharvested rice paddy.

89752. PANICUM MILIACEUM L. Poaceae. **Proso.**

No. 7276. From Peihsinan, September 27, 1930. A locally grown, glutinous millet. It is so small, it could be grown for bird feed, if for nothing else.

89753 to 89763. PHASEOLUS spp. Fabaceae.

89753 to 89757. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adsuki bean.**

89753. No. 7203. Near the Fa Hua Ssu Temple, September 17, 1930. A green mottled bean collected in a field on the mountain side south of the temple, on decomposed granitic soil in very dry situations. It is grown quite extensively here.

89754. No. 7219. Near the Fa Hua Ssu Temple, September 18, 1930. A mottled gray and green bean, collected on the mountain side in a field near the temple. It was growing on decomposed granitic soil in dry, arid situations.

89755. No. 7307. From Nonhsinfang, September 29, 1930. A small bright-red bean secured from a farmer in the village. The region is most uncongenial for farming, as about 90 per cent of the farming area is on narrow terraces on mountain sides, and the ground is very rocky and exceedingly poor.

89756. No. 7301. Near the Tan Chou Ssu Temple, September 29, 1930. A dull creamy yellow bean purchased from a farmer at Nonhsinfang, en route to the above temple.

89757. No. 7302. From Nonhsinfang, September 29, 1930. A black and green mottled bean received from a farmer.

89758 to 89762. PHASEOLUS AUREUS Roxb. **Mungbean.**

89758. No. 7268. From the village of Ssutaochiao, near the Hun River, September 27, 1930. A smooth green variety grown in an irrigated field.

89759. No. 7274. Near the Chieh Tai Ssu Temple, September 27, 1930. A locally grown, dull-green bean purchased in the village of Peihsinan.

89760. No. 7303. From Nonhsinfang, September 29, 1930. A brown bean secured from a farmer.

89761. No. 7304. From Nonhsinfang, September 29, 1930. A dull-green bean secured from a farmer.

89762. No. 7306. From Nonhsinfang, September 29, 1930. An interesting small yellow bean secured from a farmer.

89763. PHASEOLUS VULGARIS L. **Common bean.**

No. 7279. From Peihsinan, September 27, 1930. An oblong red bush garden bean with a white hilum; said to be grown locally.

89720 to 89793—Continued.

89764. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

No. 7283. From the Chieh Tai Ssu Temple, September 27, 1930. A tree growing in the temple grounds, said to be about 900 years old. It branches 8 or 10 feet from the ground and has nine main branches, therefore it is known locally as the Nine Dragon pine. At 2 feet above the ground the tree measures 228 inches in circumference; it is a fine spreading specimen.

89765. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

No. 7312. From the Tao Chou Ssu Temple, September 29, 1930. A fine branching specimen growing in one of the courts of the temple. "This is the finest specimen of lacebark pine we have seen, and if the seedlings carry out its characters, they will certainly be an acquisition in our ornamental plantings."

89766. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 7269. From Ssutaochiao, September 27, 1930. A medium-sized slightly wrinkled yellow field pea, probably grown under irrigation.

89767. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 7277. From Peihsinan, September 27, 1930. A locally grown variety of medium small yellow field pea.

89768. RHAMNUS PARVIFOLIA Bunge. Rhamnaceae. **Buckthorn.**

No. 7223. From near the Fa Hua Ssu Temple, September 18, 1930. A low-growing thorny shrub with black fruits, found on the mountain side on decomposed granitic soil in dry, arid places. It may make a good hedge or ornamental shrub, especially for rock gardens.

89769 to 89784. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 89769 to 89775 were collected near the Fa Hua Ssu Temple, September 16, 1930.

89769. No. 7190. Collected in a valley en route from Tongshan to the temple. A yellow bean with rather small oblong hilum. A single plant contained 110 pods.

89770. No. 7191. Collected en route from Tongshan to the temple, but near mountains. Seed from a single plant which contained 118 pods. The beans were yellow.

89771. No. 7192. A black-seeded variety collected en route from Tongshan, near a dry river. A single plant contained 161 pods.

89772. No. 7193. A black-seeded variety growing on granitic soil, 2 or 3 miles from the temple.

89773. No. 7204. A pale green soybean collected in a terraced field near the temple. The decomposed granitic soil was very dry. This variety is not extensively grown here.

89774. No. 7205. A black soybean found in a field growing on decomposed granitic soil in very dry situations. This variety is not grown extensively here.

89720 to 89793—Continued.

89775. No. 7221. A yellow soybean collected in a field on the mountain side, growing on poor decomposed granitic soil in dry and arid situations.

89776. No. 7245. From Chinglungchiao, September 20, 1930. A black-seeded variety collected in a field on the mountain side just north of the Great Wall, in dry, arid, rocky situations. The black soybean is extensively used by the Chinese as a stock feed.

89777. No. 7267. From the village of Hontien, en route to the Chieh Tai Ssu Temple. A locally grown variety of large yellow soybean which is rather flattened and has a brown hilum.

89778. No. 7271. From the village of Ssutaochiao, September 27, 1930. A large-seeded yellow variety with rather large brown hilum; probably grown under irrigation.

89779. No. 7273. Near the village of Ssutaochiao, September 27, 1930. A small flat black-seeded variety, collected in a field, probably grown under irrigation.

Nos. 89780 to 89782 were secured in the village of Peihsinan en route from Patachu to the Chieh Tai Ssu Temple, September 27, 1930. Said to be locally grown varieties.

89780. No. 7275. A slightly flattened green soybean with a pronounced black hilum.

89781. No. 7281. An oblong flattened black soybean.

89782. No. 7282. An oblong yellow soybean with very light-brown hilum.

Nos. 89783 and 89784 were collected at Nonhsinfang, September 29, 1930. About 90 per cent of the farming area of this region is on narrow terraces on mountain sides; the land is rocky and exceedingly poor.

89783. No. 7308. A small flat black soybean.

89784. No. 7309. A small, more or less flattened yellow soybean.

89785. SORGHUM VULGARE Pers. Poaceae. Sorghum.

No. 7280. From the village of Peihsinan, September 27, 1930, en route from Patachu to the Chieh Tai Ssu Temple. A red sorghum, said to be locally grown.

89786. SYRINGA sp. Oleaceae. Lilac.

No. 7299. From the Chieh Tai Ssu Temple, September 28, 1930. Seeds from a very old bush, said to produce white flowers.

89787. VICIA PSEUDO-OROBUS Fisch. and Mey. Fabaceae. Vetch.

No. 7254. *Wild mountain pea.* From Chinglungchiao, September 21, 1930. A plant almost shrubby in character, with dark purple pea-shaped flowers and quite uniformly 3-seeded pods. Found mixed with other vegetation, and one plant was growing from a crevice in the rocks in the railway cut. It is said to frequently grow in such places.

89720 to 89793—Continued.

89788 to 89793. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

89788. No. 7278. From the village of Peihsinan, September 27, 1930, en route from Patachu to the Chieh Tai Ssu Temple. A red cowpea, said to be a locally grown variety.

Nos. 89789 to 89791 were collected near the Fa Hua Ssu Temple, September 18, 1903.

89789. No. 7198. Brown-eyed and black-eyed cowpeas growing in a terraced field on decomposed granitic soil in a very dry situation.

89790. No. 7199. A pink cowpea growing on a mountain side in decomposed granitic soil in a very dry situation. This variety is not extensively grown.

89791. No. 7201. Seeds of a light tan cowpea with a brown hilum, found growing on the mountain side in decomposed granite in very dry situations. This variety is not grown extensively in the temple fields.

89792. No. 7270. From the village of Sanlaochiao, September 27, 1930, en route from Patachu to the Chieh Tai Ssu Temple. A brown-eyed cowpea, quite probably grown under irrigation.

89793. No. 7305. From the village of Nonhsinfang, September 29, 1930. A pink cowpea, grown on very poor soil, and secured from a farmer in the village.

89794 and 89795.

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry, Department of Agriculture and Natural Resources, Manila. Received November 8, 1930.

89794. ANNONA SPINESCENS Mart. Annonaceae.

Alagadisso. A spiny shrub up to 15 feet high, with small leathery leaves and brilliant orange-red, heart-shaped fruits 3 inches long, which are edible but insipid. It is native to Brazil.

For previous introduction see 77708.

89795. PHASEOLUS LATHYROIDES L. (*P. semierectus* L.). Fabaceae.

An upright annual legume which makes a good growth on poor land. Since it springs up with the arrival of the rainy season, it may be useful as a cover crop in the southern half of Florida, as well as in Puerto Rico and Hawaii.

For previous introduction see 76441.

89796 to 89798. SOLANUM spp. Solanaceae.

From Mexico. Tubers collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 19, 1930.

Collected in El Desierto, Distrito Federal, November 5, 1930.

89796. SOLANUM sp.

No. 265. From above the convent. A plant with very abundant smooth green fruits which have a vertical depression.

89796 to 89798—Continued.

89797. SOLANUM sp.

No. 270. From near the summit, on the east side of Cerro de San Miquel. White tubers, found in very rich loam at the base of a large pine tree.

89798. SOLANUM sp.

No. 271. Near the summit, on the east side of Cerro de San Miquel. Russet tubers, found in very rich loam in a pine forest.

89799 to 89803. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

From Sinoleka, Poland. Scions presented by Doctor Filewicz. Received November 10, 1930.

89799. *Coulon.*

89800. *Jitocoka.*

89801. *Kosztela.*

89802. *Lithuanian pippin.*

89803. *Strimitowka.*

89804 to 89841.

From Spain and Portugal. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received November 10, 1930.

89804 to 89808. AGROSTIS spp. Poaceae. **Grass.**

89804. AGROSTIS CASTELLANA Boiss. and Reut.

No. 135. Collected in the mountains west of Esconal, Spain, August 6, 1930.

89805. AGROSTIS MARITIMA Lam.

No. 109. From the experiment station near Leon, Spain, August 9, 1930.

For previous introduction see 66624.

89806. AGROSTIS SCABRIGLUMIS Boiss. and Reut.

No. 175. Collected in a gorge southeast of Granada, Spain, September 2, 1930.

89807. AGROSTIS SETACEA Curt.

No. 93. From the north slope of the Cantabrian Mountains, Spain, August, 1930.

89808. AGROSTIS sp.

No. 90. A common grass collected on the north slope of the Cantabrian Mountains, Spain, August 19, 1930.

89809. ANTIRRHINUM LATIFOLIUM Mill. Scrophulariaceae. **Snapdragon.**

No. 125. From the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89810. AQUILEGIA sp. Ranunculaceae. **Columbine.**

No. 111. Collected on the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89811. ARRHENATHERUM ELATIUS (L.) Beauv. Poaceae. **Tall oatgrass.**

No. 126. From the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89804 to 89841—Continued.

89812. ASPRIS PRAECOX (L.) Nash (*Aira praecox* L.). Poaceae. **Grass.**

No. 123. Collected in the mountains west of Esconal, Spain, August 6, 1930.

89813 to 89816. AVENA BROMOIDES Gouan. Poaceae. **Grass.**

Collected in the Genil River Canyon, 5 miles east of Granada, Spain, September 2, 1930.

89813. No. 172. 89815. No. 174.

89814. No. 173. 89816. No. 177.

89817 to 89821. BRACHYPODIUM spp. Poaceae. **Grass.**

89817 and 89818. BRACHYPODIUM MUCRONATUM Willk.

89817. No. 139. From Huesca, Spain, August 18, 1930.

89818. No. 89. From Valencia, Spain, August 8, 1930.

89819 and 89820. BRACHYPODIUM PINNATUM (L.) Beauv.

89819. No. 142. From the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89820. No. 182. From the Genil River Canyon, 5 miles east of Granada, Spain, September 2, 1930.

89821. BRACHYPODIUM sp.

No. 181. From the Genil River Canyon, 5 miles east of Granada, Spain, September 2, 1930.

89822. BROMUS MADRITENSIS L. Poaceae. **Madrid bromegrass.**

No. 124. From the mountains west of Esconal, Spain, August 6, 1930.

For previous introduction see 49806.

89823. CYTISUS SCOPARIUS (L.) Link. Fabaceae. **Scotch broom.**

No. 184. From Oporto, Portugal, September 26, 1930. A legume used in this vicinity as a green manure.

For previous introduction see 80324.

89824. DACTYLIS GLOMERATA L. Poaceae. **Orchard grass.**

No. 178. From the Genil River Canyon, 5 miles east of Granada, Spain, September 2, 1930.

89825 to 89830. FESTUCA spp. Poaceae. **Fescue.**

89825. FESTUCA OVINA L. **Sheep fescue.**

No. 121. From the Pyrenees Mountains, Canfranc, Spain, August 15, 1930.

89826. FESTUCA PSEUDOEKIA Boiss.

No. 179. From the Genil River Canyon, east of Granada, Spain, September 2, 1930.

89827. FESTUCA SPADICEA L.

No. 104. From the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89828. FESTUCA VARIA Haenke.

No. 131. From the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89804 to 89841—Continued.

89829. FESTUCA sp.

No. 101. Collected on the north slope of the Cantabrian Mountains, Spain, August, 1930.

89830. FESTUCA sp.

No. 117. From the Pyrenees Mountains, Canfranc, Spain, August 15, 1930.

89831. HELLEBORUS sp. Ranunculaceae. Hellebore.

No. 138. From the Pyrenees Mountains, Canfranc, Spain, August 15, 1930.

89832. HYPARRHENIA HIRTA (L.) Stapf. Poaceae. Grass.

No. 180. From the Genil River Canyon, 5 miles east of Granada, Spain, September 2, 1930.

For previous introduction see 75897.

89833 to 89837. LATHYRUS spp. Fabaceae.

89833 and 89834. LATHYRUS SATIVUS L. Bittervetch.

89833. No. 186. *Mullas.* Purchased in Lisbon, Portugal. Used as a vegetable, and cooked and eaten as beans.

89834. No. 197. Purchased from Robustiano Diez Obeso, in Madrid, Spain.

Nos. 89835 to 89837 were collected in the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89835. LATHYRUS sp.

No. 116.

89836. LATHYRUS sp.

No. 118.

89837. LATHYRUS sp.

No. 119.

89838. LOTUS sp. Fabaceae.

No. 107. From Huesca, Spain, August 18, 1930.

89839. LUPINUS ALBUS L. Fabaceae. White lupine.

No. 185. *Chicharos.* Purchased at Lisbon, Portugal. It is soaked in salt water and sold on the streets of Madrid and other cities of Spain.

For previous introduction see 75911.

89840. LUPINUS ANGUSTIFOLIUS L. Lupine.

No. 213. Purchased from Robustiano Diez Obeso, Madrid, Spain, September 29, 1930.

89841. MEDICAGO ARBOREA L. Fabaceae. Tree alfalfa.

No. 66. Purchased from Robustiano Diez Obeso, Madrid, Spain, September 29, 1930.

For previous introduction see 65024.

89842 to 89912.

From Africa, Spain, and Portugal. Plants and seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received November 11, 1930.

89842 to 89908. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

89842 to 89912—Continued.

89842. No. 283. Plants collected at Constantine, Algeria, Africa.

89843. No. 62. Seed purchased at Madrid, but grown near Lerida, Spain.

89844. No. 63. Wild alfalfa, collected at the experiment station near Madrid, Spain.

89845. No. 64. Locally grown seed, purchased at Granada, Spain.

89846. No. 65. Seed purchased in Madrid, but grown near Saragossa, Spain.

89847. No. 67. Seed purchased in Madrid, but grown near Totana, Spain.

89848. No. 69. Seed purchased at Jaca, but grown at Saragossa, Spain.

89849. No. 70. Seed purchased at Bilbao, but grown at Saragossa, Spain.

89850. No. 71. Seed purchased at Bilbao, but grown at Lerida, Spain.

89851. No. 72. Seed purchased at Valladolid, but grown at Aragon, Spain.

89852. No. 73. Locally grown seed purchased at Epila, Spain.

89853. No. 74. *Mielga.* Seed purchased in Valladolid, but grown in France.

89854. No. 75. Locally grown seed purchased at Saragossa, Spain.

89855. No. 76. Seed purchased at Huesca, but grown at Lerida, Spain.

89856. No. 77. Locally grown seed purchased at Leon, Spain.

89857. No. 78. Seed purchased in Valladolid, Spain, but grown in Argentine.

89858. No. 79. Seed purchased at Bilbao, but grown near Murica, Spain.

89859. No. 80. Seed purchased at Burgos, Spain.

89860. No. 81. Seed purchased at Leon, but grown at Saragossa, Spain.

89861. No. 82. Seed purchased at Valladolid, Spain.

89862. No. 83. Seed purchased at Calatayud, Spain, but grown in Germany.

89863. No. 84. Locally grown seed, purchased at Huesca, Spain.

89864. No. 85. Seed purchased at Salamanca, but grown in Saragossa, Spain.

89865. No. 86. Wild alfalfa collected along the roadside near Avila, Spain, August 6, 1930.

89866. No. 87. Wild alfalfa collected along the roadside north of Salamanca, Spain, August 7, 1930.

89867. No. 88. Wild alfalfa collected along the roadside at Jaca, Spain, August 17, 1930.

89868. No. 91. Wild alfalfa collected along the roadside south of Valladolid, Spain, August 8, 1930.

89869. No. 92. Wild alfalfa from Saragossa, Spain, August 16, 1930.

89870. No. 95. Wild alfalfa collected along the roadside south of Burgos, Spain, August 7, 1930.

89842 to 89912—Continued.

89871. No. 96. Wild alfalfa collected along the roadside near Salamanca, Spain, August 7, 1930.

89872. No. 98. Wild alfalfa collected along the roadside near Valencia, Spain, August, 1930.

89873. No. 99. Wild alfalfa collected along the roadside near Valencia, Spain, August, 1930.

89874. No. 108. Wild alfalfa collected along the roadside near Jaca, Spain, August, 1930.

89875. No. 113. Wild alfalfa from Huesca, Spain, August, 1930.

89876. No. 127. Wild alfalfa from Calatayud, Spain, August, 1930.

89877. No. 133. Cultivated alfalfa from a field near Sahagun, Spain, August, 1930.

89878. No. 143. Purchased at Jativa, but grown at Olleria, Spain.

89879. No. 144. Seed purchased at a store in Alicante, Spain, which had purchased the seed from a Barcelona store.

89880. No. 145. Locally grown seed from Onteniente, Spain.

89881. No. 146. Purchased at Palma, Majorca, but grown at Murcia, Spain.

89882. No. 147. Purchased at Alicante, but grown at Elche, Spain.

89883. No. 148. Locally grown seed from Almoradi, Spain.

89884. No. 149. Locally grown seed from Elche, Spain.

89885. No. 150. Seed purchased at Murcia, but grown at Totana, Spain.

89886. No. 151. Seed purchased at Murcia, but grown at Totana, Spain.

89887. No. 152. Seed purchased at Malaga, but grown at Alicante, Spain.

89888. No. 153. Locally grown seed from Valencia, Spain.

89889. No. 154. Seed purchased at Cordova, Spain, but probably grown in Provence.

89890. No. 183. Collected in a field near Albaida, Spain, September 9, 1930.

89891. No. 155. Seed purchased at Murcia, but grown at Totana, Spain.

89892. No. 156. Provence seed, purchased at Granada, Spain.

89893. No. 157. Seed purchased at Seville, Spain; probably grown in Murcia.

89894. No. 158. Seed purchased at Almeria, probably from Valencia, Spain.

89895. No. 159. Seed purchased at Murcia, produced in Totana, Spain.

89896. No. 160. Seed purchased at Almeria, but grown near Valencia, Spain.

89897. No. 161. Seed purchased at Almeria, but grown at Elche, Spain.

89898. No. 162. Seed purchased at Inca, Majorca, Spain.

89842 to 89912—Continued.

89899. No. 163. Wild alfalfa collected near the Sierra Nevada hotel, about 7 miles from Granada, Spain.

89900. No. 164. Wild alfalfa collected along the highway between Granada and Loja, Spain.

89901. No. 165. Wild alfalfa collected in Spain in a gorge between Pinos Genil and the Sierra Nevada hotel.

89902. No. 166. Wild alfalfa collected in the Genil Canyon, 2 miles east of Granada, Spain.

89903. No. 167. Cultivated alfalfa collected near Dolores, Spain.

89904. No. 168. French alfalfa seed purchased in Lisbon, Portugal.

89905. No. 169. Seed purchased in Coimbra, but grown in Alemtejo, Portugal.

89906. No. 170. Seed purchased in Lisbon, Portugal, and said to have come from France.

89907. No. 171. Provence seed purchased in Oporto, Portugal.

89908. No. 227. Seed purchased in Valencia and grown in the Province of Valencia, Spain.

89909 to 89912. MELILOTUS spp. Fabaceae.

89909. MELILOTUS ALBA Desr.
White sweetclover.

No. 176. Collected in the Genil Canyon, southeast of Granada, Spain.

89910 to 89912. MELILOTUS OFFICINALIS (L.) Lam. Sweetclover.

89910. No. 103. From Huesca, Spain, August, 1930.

89911. No. 106. From Burgos, Spain, August, 1930.

89912. No. 136. From Jaca, Spain, August, 1930.

89913. EREMOCITRUS GLAUCA (Lindl.) Swingle (*Atalantia glauca* Benth.). Rutaceae.

Australian desert kumquat.

From Dundas, New South Wales. Seeds presented by Herbert J. Rumsey. Received November 14, 1930.

A shrub or small tree about 14 feet high, native to the deserts of northeastern Australia. The small thick leathery leaves are gray green, and the fruits are less than an inch in diameter. The acid juice of the fruit forms the basis of an agreeable beverage, and the peel has the sweetish flavor of the kumquat. It is the hardiest of all the evergreen citrus fruits and is of promise to plant breeders.

For previous introduction see 72694.

89914 to 89920. SOLANUM spp. Solanaceae.

From Mexico. Tubers collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November and December, 1930.

89914 to 89920—Continued.

89914. SOLANUM sp.

No. 332. Collected 6 miles south of Toluca, Mexico, November 12, 1930. A plant with smooth green globular fruits and irregular shaped white tubers, some of which were tinged with purple; found along the roadside in rich loam at 8,700 feet altitude.

Nos. 89915 to 89917 were collected in Mr. Zapeda's garden, Toluca, Mexico, November 12, 1930, at 8,700 feet altitude.

89915. SOLANUM sp.

No. 333. A plant about 3 feet high with white oval tubers on very long stolons, which, according to Mr. Zapeda, is growing wild in his garden.

89916. SOLANUM sp.

No. 334. A dark warty tuber, dug by Mr. Zapeda's boy in the garden. The plant was not seen.

89917. SOLANUM sp.

No. 335. A red tuber, dug by Mr. Zapeda's boy in the garden. It has the appearance of the potato common on the market.

89918. SOLANUM sp.

No. 344. From Tenancingo, Mexico, about 50 miles from the City of Mexico, November 13, 1930. A plant with globular fruits which are whitish at first, with darker green longitudinal streaks or splotches, finally becoming mostly dark green with some darker streaks and a few white specks. The white tubers are oval; found along the roadside in stony red clay.

89919. SOLANUM TUBEROSUM L. **Potato.**

No. 422. Collected from a cultivated field about 1 mile east of San Antonio, Puebla, at 8,500 feet altitude, November 20, 1930.

89920. SOLANUM SAMBUCINUM Rydb.

No. 442. From San Juan del Rio, Queretaro, November 25, 1930. A plant about 2 feet high with white tubers, found growing in a stone fence at 1,200 feet altitude.

89921 to 89968.

From Spain. Seeds collected by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received November 10, 1930.

89921 to 89951. PHASEOLUS spp. Fabaceae.

Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

89921. PHASEOLUS CALCARATUS Roxb. **Rice bean.**

No. 188. *Frijol Americano.*

89922 to 89951. PHASEOLUS VULGARIS L. **Common bean.**

89922. No. 189. *Mantecosa de Aiguille.* A dwarf bean with yellow pods.

89923. No. 190. *Saint Fiacret.* A stringless pole bean.

89924. No. 191. *Inagotable.* An everbearing dwarf bean.

89925. No. 192. *Blanca de Argel.*

89921 to 89968—Continued.

89926. No. 194. *De Borseat.* A dwarf bean.

89927. No. 195. *Monte de Oro.* A stringless pole bean with yellow pods.

89928. No. 198. *Incomparable.* A dwarf bean.

89929. No. 199. *Reina de las Mantecosa.* A dwarf bean with yellow pods.

89930. No. 200. *Cembre gris.* A stringless pole bean.

89931. No. 201. A yellow dwarf bean which bears abundantly.

89932. No. 202. *De la granja.* A stringless pole bean.

89933. No. 203. *Mantecosa de Argel.* A dwarf stringless bean with yellow pods.

89934. No. 204. *De la Virgen.* A pole bean.

89935. No. 205. *Cresta de gallo.* A dwarf bean.

89936. No. 206. *Aspeitia.*

89937. No. 207. *Inglesa.* A stringless pole bean.

89938. No. 209. *Soisson roja.*

89939. No. 210. *De Villafranca.*

89940. No. 211. *Flageolet.* A green bean.

89941. No. 214. *Gloria de Vitry.* A dwarf bean.

89942. No. 215. *Amarilla mantecosa.* A yellow stringless pole bean.

89943. No. 217. *Coca del Pilar.* A stringless pole bean.

89944. No. 218. *Monte de Oro.* A stringless pole bean with green pods.

89945. No. 219. *Pintas.*

89946. No. 220. *Bagnolet.* A dwarf bean.

89947. No. 222. *De Herrera blanca.* A white bean.

89948. No. 223. *Mantecosa de Argel.* A pole bean with yellow pods.

89949. No. 224. *De Pravia.* A pole bean.

89950. No. 225. *De Herrera.* A flesh-colored bean.

89951. No. 226. *Gloria de Douill* or *Parisien.* A dwarf bean.

89952. PHLEUM PRATENSE L. Poaceae. **Timothy.**

No. 128. Collected in the Pyrenees Mountains, near Canfranc, Spain, August 15, 1930.

89953. POA COMPRESSA L. Poaceae. **Canada bluegrass.**

No. 110. From the experiment station at Leon, Spain, August 9, 1930.

89954. POA sp. Poaceae. **Grass.**

No. 105. From the Pyrenees Mountains, near Canfranc, Spain. August 15, 1930.

89921 to 89968—Continued.

89955. STIPA CALAMAGROSTIS (L.) Wahlenb. Poaceae. **Feathergrass.**

No. 112. From Canfranc, Spain, August 15, 1930.

89956. STIPA TENACISSIMA Jusl. Poaceae. **Feathergrass.**

No. 228. Collected north of Cartagena, Spain.

89957. TRIFOLIUM ALEXANDRINUM L. Fabaceae. **Berseem.**

No. 68. Purchased in a grain store at Granada, Spain.

89958. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

No. 102. Collected near Canfranc, Spain, August 15, 1930.

89959. TRISETUM FLAVESCENS (L.) Beauv. Poaceae. **Grass.**

No. 120. Collected at Canfranc, Spain, August 15, 1930.

89960 to 89968. VICIA spp. Fabaceae. **Vetch.**

89960. VICIA DASYCARPA Ten.

No. 132. Collected near Canfranc, Spain, August 15, 1930.

For previous introduction see 58718.

89961. VICIA ERVILIA (L.) Willd.

No. 216. *Yerro de Espana.* Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

89962. VICIA FABA L. **Broadbean.**

No. 212. *Habas de Egipto.* Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

88963 and 89964. VICIA MONANTHOS (L.) Desv.

For previous introduction see 40294.

89963. No. 114. *Algaroba.* Collected in a field near Avila, Spain, August 6, 1930. Used for feed for cattle and goats.

89964. No. 193. *Algaroba.* Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

89965. VICIA NARBONENSIS L.

No. 196. *Alverja de Narbona.* Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

For previous introduction see 80216.

89966 and 89967. VICIA SATIVA L. **Common vetch.**

89966. No. 187. *Yeros.* Purchased in Lisbon, Portugal, September 24, 1930. Grown as cattle feed.

89967. No. 221. *Albeya Vellude.* Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

89968. VICIA SATIVA LEUCOSPERMA (Moench) Seringe.

No. 208. *Alverja blanca.* Purchased from Robustiano Diez Obeso, Madrid, September 29, 1930.

89969. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From the island of St. Helena, South Atlantic Ocean. Seeds presented by H. Bruins-Lich, Agricultural and Forestry Department. Received November 13, 1930.

Seeds grown locally.

89970 to 89984. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Morocco, Africa. Seeds presented by Guy Roberty, Station de Selection et d'Essais de Semences, Rabat, through H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received November 13, 1930.

89970. C. A. M. 1. *Tiallaline.*

89971. C. A. M. 2. *Bouklouf-Tillicht.*

89972. C. A. M. 3. *M'zizel.*

89973. C. A. M. 4. *Amougueur.*

89974. C. A. M. 5. *Tiouzaghim.*

89975. C. A. M. 6. *Talahrirt.*

89976. C. A. M. 7. *Gourrama.*

89977. C. A. M. 8. *Toulal-Mellaha.*

89978. C. A. M. 9. *Baknou-Irara.*

89979. C. A. M. 10. *Ksar es Souk.*

89980. C. A. M. 11. *Tarda.*

89981. C. A. M. 12. *Tizimi.*

89982. C. A. M. 13. *Arab Sebbah.*

89983. C. A. M. 14. *Aoufous.*

89984. S. S. 1. *Mezguita-x.* From Oued Dzaa, northern Sahara.

89985. DRACAENA DRACO L. Liliaceae. **Dragontree.**

From Tunisia, Africa. Seeds presented by F. Boeuf, Chief, Botanical Service, Ariana, near Tunis. Received November 14, 1930.

A curious ornamental tropical tree which becomes 60 feet high, with numerous crowded sword-shaped, glaucous-green leaves, greenish flowers, and orange berries.

For previous introduction see 79567.

89986 to 89990.

From Dedamsvaart, Netherlands. Plants purchased from B. Ruys (Ltd.), Royal Moerheim Nurseries. Received November 15, 1930.

89986 to 89988. HELENIUM AUTUMNALE L. Asteraceae.

89986. *Crimson beauty.* A striking variety about 24 inches high with bronze-carmine flowers.

89987. *Madame Canivet.* A tall plant 4 feet high with large yellow flowers which have dark centers.

89988. *Wyndley.* A strong plant, 3 feet high, which does not require staking. The large flowers are bronze and yellow.

89989 and 89990. HELENIUM BIGELOVII A. Gray. Asteraceae. **Bigelow sneezeweed.**

89989. A low herbaceous perennial, 2 to 3 feet high, with spatulate to oblong-lanceolate entire leaves, and

89986 to 89990—Continued.

flower heads over 2 inches across with yellow ray and purple disk flowers, borne on long slender stalks. It prefers damp situations and blossoms in August in California, where it is native.

89990. Variety *Aurantiacum*. A new variety about 3 feet high with golden yellow flowers which appear in the early spring.

89991 to 89994. ALOE spp. Liliaceae.

From Barberton, Transvaal, South Africa. Seeds presented by George Thorncroft. Received November 17, 1930.

89991. ALOE BARBERTONIAE Pole Evans.

A stemless herbaceous succulent with a rosette of lanceolate spiny margined leaves blotched with white above and greenish white and unspotted below. The flower stalks, often two from the same rosette, are 3 to 4 feet high, and bear loosely flowered racemes of jasper-red tubular flowers. It is native to South Africa.

89992. ALOE GLOBULIGEMMA Pole Evans.

A stemless herbaceous succulent with a rosette of erect-spreading sword-shaped leaves 1 to 2 feet long, having cartilaginous, wavy-toothed margins. The flower stalk, 3 to 4 feet high, carries a dense raceme 1 foot long of tubular flowers which are globular and red in the bud, becoming elongated and sulphur yellow tinged with red at the base. It is native to South Africa.

89993. ALOE PETRICOLA Pole Evans.

A stemless herbaceous succulent with a rosette of lanceolate spiny margined leaves, and a branched flower stalk 2 to 3 feet high, bearing a dense cylindrical raceme of tubular flowers which are nopal red in bud and become yellow to orange buff. It is native to South Africa.

89994. ALOE THORNCROFTII Pole Evans.

A short-stemmed herbaceous succulent with a rosette of lanceolate dark-green leaves having a narrow sinuous purple toothed margin. The flower stalks are 3 to 5 feet high and bear loose racemes of large rose-colored, tubular flowers. It is native to South Africa.

89995. JUBAEA CHILENSIS (Molina) Baill. (*J. spectabilis* H. B. K.). Phoenicaceae. **Sirup palm.**

From Santiago, Chile. Seeds presented by Salvador Izquierdo. Received November 18, 1930.

A Chilean palm, 40 feet high, which thrives on very dry soil. The pinnate leaves are 6 to 12 feet long, and the coconutlike fruits are 2 inches in diameter. It is an ornamental palm, but a slow grower.

For previous introduction see 77154.

89996 to 90008.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 18, 1930.

89996 to 90008—Continued.

89996. COSMOS DIVERSIFOLIUS Otto. Asteraceae. **Black cosmos.**

From north of Cuernavaca, Morelos, October 7, 1930. A cosmos 2 or 3 feet high with dark velvety red flowers.

89997 to 90008. SOLANUM spp. Solanaceae.

89997. SOLANUM sp.

No. 11. For introduction of tubers and description, see 89537.

Nos. 89998 to 90007 were collected at Rio Frio, Puebla, at 9,000 feet altitude, October 8, 1930.

89998. SOLANUM sp.

No. 29. *Papa silvestre*. For introduction of tubers and description, see 89531.

89999. SOLANUM sp.

No. 30. For introduction of tubers and description, see 89538.

90000. SOLANUM sp.

No. 31. *Papa*. For introduction of tubers and description, see 89539.

90001. SOLANUM sp.

No. 38. For introduction of tubers and description, see 89540.

90002. SOLANUM sp.

No. 40. For introduction of tubers and description, see 89533.

90003. SOLANUM sp.

No. 41. For introduction of tubers and description, see 89541.

90004. SOLANUM sp.

No. 42. For introduction of tubers and description, see 89542.

90005. SOLANUM sp.

No. 43. A plant with a smooth obconic seed ball which has a few rather obscure white flecks on the surface; found growing along a ditch bank in rich soil in an open field.

90006. SOLANUM sp.

No. 44. For introduction of tubers and description see 89535.

90007. SOLANUM sp.

No. 50. A plant with smooth green obconic fruits, found growing along a ditch in an open field.

90008. SOLANUM sp.

No. 218. A cultivated woody vine found in Dr. C. Conzatti's garden, Oaxaca, September 25, 1930.

90009. ASPARAGUS RACEMOSUS Willd. Convallariaceae.

From Barberton, Transvaal, South Africa. Seeds presented by George Thorncroft. Received November 19, 1930.

A succulent climbing plant found among trees on poor stony soil at 1,000 feet altitude, where the summers are very hot and there is no rain for the four winter months. Its masses of snow-white flowers make it a fine ornamental.

For previous introduction see 76896.

90010 to 90048.

From Spain. Seeds collected at the Botanic Garden, Madrid, by H. L. Westover, agricultural explorer, Bureau of Plant Industry. Received November 19, 1930.

90010 to 90030. MEDICAGO spp. Fabaceae.

90010. MEDICAGO ARBOREA L. **Tree alfalfa.**

No. 264.

90011. MEDICAGO ASCHERSONIANA Urban.

No. 252.

90012. MEDICAGO CRETACEA Bieb.

No. 261.

90013. MEDICAGO DECANDOLLEI Tineo.

No. 259.

90014. MEDICAGO DISCIFORMIS DC.

No. 253.

90015. MEDICAGO FALCATA L. **Yellow-flowered alfalfa.**

No. 260.

90016. MEDICAGO GLOBULOSA Desv.

No. 263.

90017. MEDICAGO HISPIDA Gaertn.

No. 257.

90018. MEDICAGO HISPIDA DENTICULATA (Willd.) Urban. **Bur clover.**

No. 244.

90019. MEDICAGO LACINIATA (L.) Mill.

No. 250.

90020. MEDICAGO LUPULINA L. **Black medic.**

No. 255.

90021. MEDICAGO MURICATA (L.) All.

No. 258.

90022. MEDICAGO OBSCURA HELIX (Willd.) Urban.

No. 262.

90023. MEDICAGO ORBICULARIS (L.) All.

No. 248.

90024. MEDICAGO PRAECOX DC.

No. 247.

90025. MEDICAGO PROSTRATA Jacq.

No. 251.

90026. MEDICAGO SATIVA L. **Alfalfa.**

No. 249.

90027. MEDICAGO SCUTELLATA (L.) Mill. **Snail medic.**

No. 245.

For previous introduction see 44559.

90028. MEDICAGO SUFFRUTICOSA Ramond.

No. 246.

90029. MEDICAGO TRUNCATULA Gaertn.

No. 256.

90030. MEDICAGO TUBERCULATA (Retz.) (Willd.)

No. 254.

90031 to 90038. MELILOTUS spp. Fabaceae. **Sweetclover.**

90010 to 90048—Continued.

90031. MELILOTUS ALBA Desr. **White sweetclover.**

No. 270.

90032. MELILOTUS BICOLOR Boiss. and Bal.

No. 269.

90033. MELILOTUS INDICA (L.) All.

No. 265.

90034. MELILOTUS ITALICA (L.) Lam.

No. 267.

90035. MELILOTUS NEAPOLITANA Ten. (*M. gracilis* DC.).

No. 266.

For previous introduction see 78795.

90036. MELILOTUS OFFICINALIS (L.) Lam.

No. 268.

90037. MELILOTUS SUAVEOLENS Ledeb.

No. 271.

90038. MELILOTUS SULCATA Desf.

No. 272.

90039 to 90048. TRIGONELLA spp. Fabaceae.

90039. TRIGONELLA BALANSAE Boiss. and Reut.

No. 274.

90040. TRIGONELLA BRACHYCARPA (Fisch.) Moris.

No. 275. A low hairy annual legume with trifoliolate leaves of obovate-serrulate leaflets a quarter of an inch long and light-yellow flowers in axillary heads. It is native to Asia Minor.

90041. TRIGONELLA CAERULEA (L.) Seringe.

No. 279.

For previous introduction see 66954.

90042. TRIGONELLA CALLICERAS Fisch.

No. 282.

For previous introduction see 66530.

90043. TRIGONELLA CORNICULATA L.

No. 280.

For previous introduction see 58714.

90044. TRIGONELLA GLADIATA Stev.

No. 276.

For previous introduction see 33300.

90045. TRIGONELLA HAMOSA L.

No. 281.

For previous introduction see 63997.

90046. TRIGONELLA MONSPELIACA L.

No. 277.

For previous introduction see 58716.

90047. TRIGONELLA POLYCERATA L.

No. 273.

For previous introduction see 72818.

90048. TRIGONELLA SPINOSA L.

No. 278.

For previous introduction see 31067.

90049. PISTACIA TEREBINTHUS × VERA. Anacardiaceae. **Hybrid pistache.**

From Chios Island, Greece. Seeds presented by George J. Choremis, at the request of David Fairchild, agricultural explorer, with the Allison V. Armour expedition. Received November 19, 1930.

A hybrid between the true pistache (*Pistacia vera*) and the terebinth tree (*P. terebinthus*).

90050 to 90093.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 19, 1930.

90050. ANNESLIA STRIGILLOSA Britt. and Rose. Mimosaceae.

No. 150. From Nogales, Vera Cruz, October 24, 1930. A plant 10 to 15 feet high, found at 5,000 feet altitude.

90051. ARBUTUS XALAPENSIS H. B. K. Ericaceae.

No. 290. *Madrono.* From the mountains southeast of Real del Monte, Hidalgo, November 6, 1930. A tree up to 15 feet high found near the rocky summits of the mountains. The red fruits are less than an inch in diameter.

90052. COLOGANIA AFFINIS Mart. and Gal. Fabaceae.

No. 202. From west of Tres Marias, Morelos, 35 miles from Mexico City. An evergreen climber, native to south-central Mexico, with hairy ovate leaves and small purplish-red flowers.

90053. DOLICHOLUS LONGERACEMOSUS (Mart. and Gal.) Rose. Fabaceae.

No. 141. From Nogales, Vera Cruz, October 24, 1930. A vine collected in the mountains north of the town at 5,500 feet altitude.

90054. COSMOS DIVERSIFOLIUS Otto. Asteraceae. **Black cosmos.**

No. 216. From west of Tres Marias, Morelos, October 29, 1930, at 10,000 feet altitude.

For previous introduction see 89996.

90055. CROTALARIA INCANA L. Fabaceae.

No. 124. From Nogales, Vera Cruz, October 24, 1930. A plant 20 to 24 inches high with yellow flowers, found in red clay at 4,300 feet altitude.

90056. CROTALARIA PURSHII DC. Fabaceae.

No. 142. From Nogales, Vera Cruz, October 24, 1930. A plant 12 to 18 inches high with yellow flowers, found at 5,500 feet altitude in the mountains north of the town.

90057. PAROSELA SEEMANNI (S. Wats.) Rose. Fabaceae.

No. 182. From Estrella, Morelos, October 28, 1930. A plant 20 to 40 inches high with purple flowers, found in open rocky lava formation at 7,500 feet altitude.

90058. ECHEVERIA sp. Crassulaceae.

No. 175. From Nogales, Vera Gruz, October 24, 1930. A plant found among rocks at 5,500 feet altitude.

90050 to 90093—Continued.

90059. FALCATA sp. Fabaceae.

No. 115. From Mexico.

90060. FALCATA sp. Fabaceae.

No. 237. From Real del Monte, Hidalgo, November 3, 1930. A legume secured at 9,000 feet altitude.

90061. QUAMOCLIT COCCINEA (L.) Moench. Convolvulaceae. **Scarlet starglory.**

No. 152. From Nogales, Vera Cruz, October 24, 1930. A vine with bright-red flowers and foliage like a morning-glory, found at 6,200 feet altitude in rich soil. It was found climbing over a tree.

90062. LUPINUS sp. Fabaceae. **Lupine.**

No. 145. From Nogales, Vera Cruz, October 24, 1930. A plant with purple flowers, secured at 5,700 feet altitude.

90063. LUPINUS sp. Fabaceae. **Lupine.**

No. 217. Collected about 4 miles west of Tres Marias, Morelos, October 29, 1930.

90064. MAMMILLARIA sp. Cactaceae. **Cactus.**

No. 172. From Santa Rosa, Vera Cruz, October 23, 1930. A round cactus collected at 6,500 feet altitude.

90065. MAMMILLARIA sp. Cactaceae. **Cactus.**

No. 289. Collected at Real del Monte, Hidalgo, November 6, 1930. A cactus with pink flowers found on open bare rock.

90066. MEIBOMIA sp. Fabaceae.

No. 130. From Nogales, Vera Cruz, October 24, 1930. A plant found growing in red clay at 4,300 feet altitude.

90067. MONTANOA FRUTESCENS (Mairet) Hemsl. Asteraceae.

No. 210. From Tres Marias, Morelos, October 29, 1930. An herb 5 to 10 feet high with many attractive white flowers, collected at 10,000 feet altitude.

90068. PASSIFLORA EXSUDANS Zucc. Passifloraceae.

No. 200. From Canada de Contreras, a few miles southwest of Mexico City, Distrito Federal, October 25, 1930. A woody vine with heart-shaped, 3-lobed leaves and white flowers more than an inch across in the leaf axils. It is native to Mexico.

90069. PENTSTEMON sp. Scrophulariaceae.

No. 242. From Real del Monte, Hidalgo, November 3, 1930. Collected on the mountain slope east of the Trinidad mine at over 9,000 feet altitude.

90070. DOLICHOLUS LONGERACEMOSUS (M. and G.) Rose. Fabaceae.

No. 165. From Santa Rosa, Vera Cruz, October 23, 1930. A perennial leguminous vine with hairy trifoliolate leaves and pale-purple flowers in axillary racemes. Native to south-central Mexico.

For previous introduction see 73253.

90071 and 90072. PHASEOLUS ADENANTHUS G. Meyer. Fabaceae. **Bean.**

Collected west of Tres Marias, Morelos, about 35 miles from Mexico City, at 10,000 feet altitude.

For previous introduction see 56685.

90050 to 90093—Continued.

90071. No. 204. 90072. No. 206.

90073 and 90074. QUERCUS spp. Fagaceae. **Oak.**

Collected on the mountain side above the Trinidad mine, near Real del Monte, Hidalgo, November 3, 1930, at 9,000 feet altitude.

90073. QUERCUS sp.

No. 232. A tree 30 to 40 feet high with nearly globular fruits.

90074. QUERCUS sp.

No. 233. A tree 30 to 45 feet high with ellipsoid fruits and wider leaves than the preceding, No. 232 [90073]. It is very common.

90075 to 90077. SALVIA *spp.* Menthaceae. **Sage.**

90075. SALVIA sp.

No. 195. From Tres Marias, Morelos, about 30 miles from Mexico City, October 18, 1930. A common ornamental plant up to 3 feet high with blue flowers, collected at 10,000 feet altitude.

90076. SALVIA sp.

No. 274. From El Desierto, Distrito Federal, November 5, 1930. A mint with large, dark-blue flowers which appear late in the season.

90077. SALVIA sp.

No. 272. From El Desierto, Distrito Federal, November 5, 1930. A mint with fine red flowers.

90078. ALTAMIRANOA sp. Crassulaceae.

No. 292. From southeast of Real del Monte, Hidalgo, November 6, 1930. A woody plant found on a rocky summit, growing among mammillaria.

90079. TERAMNUS UNCINATUS (L.) Swartz. Fabaceae.

No. 126. From Nogales, Vera Cruz, October 24, 1930. A legume found at 4,300 feet altitude, growing in red clay.

90080 to 90083. SOLANUM spp. Solanaceae.

90080. SOLANUM sp.

No. 193. For introduction of tubers and description, see 89647.

90081. SOLANUM sp.

No 207. From near Tres Marias, Morelos. For introduction of tubers, see 89648.

90082. SOLANUM sp.

No. 261. For introduction of tubers and description, see 89689.

90083. SOLANUM sp.

No. 265. For introduction of tubers and description, see 89796.

90084. CRUSEA CALOCEPHALA DC. Rubiaceae.

No. 136. From Nogales, Vera Cruz, October 24, 1930. A plant about 12 inches high with purple flowers, collected north of the town at 5,500 feet altitude.

90050 to 90093—Continued.

90085. VERNONIA ARCTIOIDES Less. Asteraceae.

No. 135. From Nogales, Vera Cruz, October 24, 1930. An aster 15 to 20 feet high, with large purple flowers which form a large head.

90086. SISYRINCHIUM ALATUM ANGUSTISSIMUM Rob. and Greenm. Iridaceae.

No. 103. From Pic de Xitle, Distrito Federal, October 17, 1930. A plant with yellow flowers, found in a lava field at 9,000 feet altitude.

90087. BOMAREA OVATA (Cav.) Mirb. Amaryllidaceae.

No. 151. From Nogales, Vera Cruz, October 14, 1930. A plant collected at 6,000 feet altitude.

90088. ARENARIA DECUSSATA Willd. Silenaceae.

No. 284. From Real del Monte, Hidalgo, November 6, 1930. A prostrate, herbaceous perennial from south-central Mexico, with rigid subulate leaves and terminal white flowers.

90089. MINKELERSIA GALACTIOIDES Mart. and Gal. Fabaceae.

No. 203. From west of Tres Marias, Morelos, about 35 miles from the City of Mexico, October 29, 1930. A leguminous herbaceous vine collected at 10,000 feet altitude, with trifoliolate leaves and axillary blue-violet flowers 1 inch long on stems 3 inches long. Native to Oaxaca, Mexico.

90090. CASTILLEJA ARVENSIS Cham. and Schlecht. Scrophulariaceae.

No. 194. From Tres Marias, Morelos, October 28, 1930. An ornamental plant up to 10 feet high with narrowly spatulate hairy leaves and very bright-red flowers. Found in a cornfield, in rich loam, at 10,000 feet altitude.

90091. FUCHSIA THYMIFOLIA H. B. K. Onagraceae.

No. 236. From Real del Monte, Hidalgo, on the mountain side near the Trinidad mine, at 9,000 feet altitude, November 3, 1930. A shrub about 3 feet high with red berries.

For previous introduction see 40583.

90092 and 90093. CLITORIA MEXICANA Link. Fabaceae.

From Nogales, Vera Cruz, October 24, 1930. Collected north of the town.

90092. No. 140. Collected at 5,500 feet altitude.

90093. No. 149. Collected at 6,400 feet altitude.

90094 to 90106. KNIPHOFIA HYBRIDA Hort. Liliaceae. **Torchlily.**

From England. Plants purchased from Maurice Prichard & Sons (Ltd.), Christchurch, Hants. Received November 20, 1930.

90094. Variety *aurantiaca.* A very fine tall sort.

90095. Variety *Bertram O. Prichard.* Orange ochre.

90096. Variety *F. Burbidge.* Small spikes of orange-yellow flowers, 4 to 5 feet high, flowering in June and July.

90094 to 90106—Continued.

90097. Variety *Glitter*. Yellow.

90098. Variety *Grand Pyramid*.

90099. Variety *Mount Etna*, also called *The Rocket*. Intense scarlet, flowering in August and September.

90100. Variety *Mrs. Walker Munro*. Tall with extra fine large flowers.

90101. Variety *Mrs. Wynne Hood*. Deep red.

90102. Variety *Ruby*.

90103. Variety *R. Wilson Kerr*.

90104. Variety *Sir C. K. Butler*. Stout spikes 5 feet high of sulphur and light-red flowers which appear in July and August.

90105. Variety *Sunset*. Red.

90106. Variety *Triumph*. Golden apricot, height 3 feet, flowering in September and October.

90107 to 90110.

From Japan. Seeds presented by K. Yashiroda, Tonosho-Kyoku, Kagawaken. Received November 19, 1930.

90107. ASTRAGALUS SINICUS L. Fabaceae.

A red-flowered variety, quite common in the farming area about Tokyo, where it is said to be used for green manure and forage. It is a winter crop, being planted early in the fall.

For previous introduction see 81727.

90108. BUXUS MICROPHYLLA Sieb. and Zucc. Buxaceae. **Box.**

An evergreen shrub up to 3 feet high or often prostrate. The stems are sharply quadrangular, and the obovate leaves are less than an inch long. It is native to Japan.

90109. MAGNOLIA PARVIFLORA Sieb. and Zucc. Magnoliaceae. **Oyama magnolia.**

A small Japanese magnolia with oblong leaves 4 to 6 inches long and fragrant white cup-shaped flowers 3 to 4 inches across, with large pink sepals and crimson stamens.

For previous introduction see 66584.

90110. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

For previous introduction and description see 89387.

90111. SOLANUM CILIOLATUM Mart. and Gal. Solanaceae.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 18, 1930.

No. 230. From Cerro San Felipe, Oaxaca, September 26, 1930. A low perennial herb with a thick root, like manioc, and large white fragrant night-blooming flowers. It is native to Mexico.

For previous introduction see 41487.

90112 to 90119. ERICA spp. Ericaceae.

From Dedemsvaart, Netherlands. Plants purchased from B. Ruys (Ltd.), Royal Moerheim Nurseries. Received November 20, 1930.

90112 to 90119—Continued.

90112 and 90113. ERICA CARNEA L. **Spring heath.**

For previous introduction see 80913.

A variety 4 to 5 feet high, with soft green asparagus like foliage and sweet-scented flowers which appear between March and May.

90112. Variety *Vivelli*. A red-flowered variety.

90113. Variety *Winter Beauty*. A variety bearing rosy pink flowers during midwinter.

90114. ERICA CILIARIS L. **Fringed heath.**

Variety *Mrs. C. H. Gill*.

For previous introduction see 80922.

90115 and 90116. ERICA DARLEYENSIS Bean. **Darley heath.**

90115. Variety *Stuartii*.

90116. Variety *Dawn*.

90117 to 90119. ERICA VAGANS L. **Cornish heath.**

For previous introduction see 85856.

A low shrub, native to Europe, a foot or more high, with the leaves in whorls of four or five and pale purplish-red flowers.

90117. Variety *Lyonesse*.

90118. Variety *Mrs. B. F. Maxwell*.

90119. Variety *St. Keverne*.

90120 to 90297.

From Manchuria and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received November 21, 1930.

90120. ACER sp. Aceraceae. **Maple.**

From the forestry garden of the Agricultural School, Shariin, Chosen, September 10, 1930. Said to be a native of Chosen.

90121 to 90123. AESCHYNOMENE INDICA L. Fabaceae.

For previous introduction see 82103.

90121. No. 6245. From plants along the road about 2 miles north of Chuwa, Chosen, August 27, 1930. This species was seen in the green-manure experiments at the Kotoni Experiment Station, Kokushu, last year and looked very promising. It looks as though it may have great value as a summer green manure either on wet or dry lands.

90122. No. 6311. From a soybean and millet field on a farm west of Shariin, Chosen, September 11, 1930. This species grew very abundantly in the field and should make an excellent summer green manure.

90123. No. 6403. From a field near Makaton, Manchuria, October 7, 1930. In Manchuria this species is smaller than in Chosen. It may be of value for green manure.

90124 to 90126. AGROPYRON spp. Poaceae.

Received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930.

90120 to 90297—Continued.

90124. AGROPYRON CANINUM (L.) Beauv. Poaceae. **Grass.**

No. 6383. A promising wild grass for forage.

90125. AGROPYRON CRISTATUM (L.) Gaertn. Poaceae. **Wheatgrass.**

No. 6381. One of the promising forage grasses at the experiment station.

90126. AGROPYRON SEMICOSTATUM Nees. Poaceae. **Grass.**

No. 6385.

90127. ANDROPOGON MICRANTHUS Kunth. Poaceae. **Grass.**

No. 6407. From the mountain region near Oshozan, Manchuria, October 7, 1930. A wild grass about 20 inches high; grows well on poor soil.

90128. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

No. 6418. A native variety of peanut, obtained from a farmer near Nanzan village, Manchuria, October 10, 1930. Many of the pods contain four nuts.

90129 and 90130. ARUNDINELLA ANOMALA Steud. Poaceae. **Grass.**

90129. No. 6390. From the Botandai hill region, Heijo (Pyengyang), Chosen, September 28, 1930.

90130. No. 6408. From the mountain region near Oshozan, Manchuria, October 7, 1930. A wild grass found on poor soil.

90131 and 90132. ASTRAGALUS DAVURICUS DC. Fabaceae. **Milkvetch.**

Obtained through M. Kosai, forage-crop expert, South Manchurian Experiment Station, Kungchuling, Manchuria, October 2, 1930.

For previous introduction see 89724.

90131. No. 6374. Should be of value as a green-manure crop.

90132. No. 6375. Promising as a green-manure and forage crop.

90133. CALAMAGROSTIS EPIGEJOS (L.) Roth. Poaceae. **Grass.**

No. 6178. Collected in and near a Chinese farm-village graveyard, about 2 miles southwest of Chinchon, Manchuria, August 13, 1930. This grass grows on rather poor soil and is fairly abundant.

For previous introduction see 84282.

90134 to 90136. CASSIA MIMOSOIDES L. Caesalpiniaceae.

90134. No. 6335. Along the road near Rikiho, Chosen, September 15, 1930. This species occurs very abundantly in waste places and fields. It grows well on poor soil and may be of value for green manure.

90135. No. 6339. From the hill section near Ritsuri, Chosen, September 16, 1930. The plants, 10 to 18 inches high, found on poor soil, grow very abundantly throughout this section.

90136. No. 6405. From a field in the mountain region near Oshozan, Manchuria, October 7, 1930. The plant grows on very poor soil and may be of value for green manure.

90120 to 90297—Continued.

90137. CHLORIS VIRGATA Swartz. Poaceae. **Feather fingergrass.**

No. 6362. From the side of a field near Ritsuri, Chosen, September 26, 1930. This grass, about 24 inches high, was found growing on poor soil.

90138. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean.**

No. 6406. From plants along a stone wall in a farm village, near Oshozan, Manchuria, October 7, 1930. Seed medium large and black; pods long and narrow. It is used as a green vegetable bean and also as a dry bean.

90139. ELYMUS SIBIRICUS L. Poaceae. **Grass.**

No. 6382. Received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930. A promising grass for forage.

For previous introduction see 75738.

90140. ERAGROSTIS FERRUGINEA (Thunb.) Beauv. Poaceae. **Grass.**

No. 6363. From the side of a field near Ritsuri, Chosen, September 26, 1930. The grass, 24 to 30 inches high, makes a good growth on poor soil.

90141 and 90142. EUONYMUS spp. Celastraceae.

90141. EUONYMUS sp.

No. 6395. From the mountain region near Dairen, Manchuria, October 5, 1930. Bushes 2 to 3 feet high; fruit yellow with red aril.

90142. EUONYMUS sp.

No. 6426. From shrubs 3 to 4 feet high along the mountain side south of Dairen, Manchuria, October 14, 1930. Fruit bright red; a rather pretty ornamental.

90143. EVODIA HUPEHENSIS Dode. Rutaceae.

No. 6427. From trees, 10 to 20 feet high, found along gullies in the mountain region south of Dairen, Manchuria, October 15, 1930. The seed is said to be used for medicinal purposes.

For previous introduction see 77861.

90144. FESTUCA sp. Poaceae. **Fescue.**

No. 6380. Received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930. A promising forage grass.

90145. GLYCYRRHIZA sp. Fabaceae. **Licorice.**

No. 6186. From plants 3 to 4 feet high along the roadside near a Chinese farm village, 2 miles northwest of Chinchon, Manchuria, August 13, 1930.

90146 to 90151. HEMEROCALLIS spp. Liliaceae. **Daylily.**

90146. HEMEROCALLIS sp.

No. 6270. From the Senkyori region, about 6 miles east of Heijo, Chosen, September 1, 1930. The plants, 24 to 36 inches high, have lemon-colored flowers.

90120 to 90297—Continued.

90147. HEMEROCALLIS sp.

No. 6307. Collected about 4 miles northeast of Heijo, Chosen, September 8, 1930. A low-growing early variety 12 to 18 inches high.

90148. HEMEROCALLIS sp.

No. 6320. From the hill region southwest of Heijo, Chosen, September 12, 1930. The plants, 18 to 24 inches high, are not very abundant.

90149. HEMEROCALLIS sp.

No. 6340. From the hill section near Ritsuri, Chosen, September 16, 1930. The plants, 30 to 40 inches high, are said to have lemon-yellow flowers.

90150. HEMEROCALLIS sp.

No. 6435. From the mountain region south of Dairen, Manchuria, October 15, 1930. The plants, 2 to 3 feet high, have bright lemon-yellow flowers.

90151. HEMEROCALLIS sp.

No. 6413. From the mountain region near Oshozan, Manchuria, October 7, 1930. The plants, 2 to 3 feet high, have bright lemon-yellow flowers.

90152. HORDEUM NODOSUM L. Poaceae. **Grass.**

No. 6384. Received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930.

For previous introduction see 61319.

90153. INDIGOFERA sp. Fabaceae.

No. 6442. From the mountain region south of Dairen, Manchuria, October 15, 1930. Woody plants 18 to 30 inches high, found on poor dry rocky soil.

90154. IRIS DICHOTOMA Pall. Iridaceae. **Vesper iris.**

No. 6410. From the mountain region near Oshozan, Manchuria, October 7, 1930. A plant with flower stems 18 to 24 inches high and somewhat small lavender flowers.

90155 to 90176. LESPEDEZA spp. Fabaceae. **Bushclover.**

90155 and 90156. LESPEDEZA DAURICA (Laxm.) Schindler.

90155. No. 6388. From Botandai hill region, Heijo (Pyengyang), Chosen, September 28, 1930.

90156. No. 6411. From the mountain region near Oshozan, Manchuria, October 7, 1930. A bushclover found growing on poor soil.

90157 to 90159. LESPEDEZA STIPULACEA Maxim.

90157. No. 6360. Along the road near Chuwa, Chosen, September 25, 1930. The plants, 6 to 12 inches high, grow very abundantly in this section.

90158. No. 6391. From the mountains near Dairen, Manchuria, October 5, 1930. This species grows on very poor soil.

90159. No. 6425. From mountains south of Dairen, Manchuria, October 14, 1930. This species grows abundantly in dry waste places and on poor soils.

90120 to 90297—Continued.

90160. LESPEDEZA STRIATA (Thunb.) Hook. and Arn.

No. 6354. From a hillside near Ritsuri, Chosen, September 23, 1930. The plants, 12 to 16 inches high, were just beginning to mature seed.

90161 to 90166. LESPEDEZA TOMENTOSA (Thunb.) Sieb.

90161. No. 6355. From the hill section near Ritsuri, Chosen, September 23, 1930. Plants 30 to 40 inches high were quite common in this section.

90162. No. 6392. From the mountains near Dairen, Manchuria, October 5, 1930. This species grows abundantly in the lower mountain regions and is found on rather poor soils.

90163. No. 6412. From the mountain region near Oshozan, Manchuria, October 7, 1930. Found growing on poor soil.

90164. No. 6432. From plants 30 to 40 inches high, collected in the mountain region south of Dairen, Manchuria, October 15, 1930.

90165. No. 6438. From the mountain region south of Dairen, Manchuria, October 15, 1930. Plants 30 to 40 inches high, found growing on poor soils.

90166. No. 6439. From a single plant, over 3 feet high, collected on poor dry soil in the mountain region south of Dairen, Manchuria, October 15, 1930.

90167. LESPEDEZA VIRGATA (Thunb.) DC.

No. 6356. From the hill region near Ritsuri, Chosen, September 23, 1930. Plants 20 to 26 inches high, which may have value as pasture or hay.

For previous introduction see 62182.

90168. LESPEDEZA sp.

No. 6338. From the hill section near Ritsuri, Chosen, September 16, 1930. Plants 36 to 42 inches high; may have value for forage or green manure.

Nos. 90169 to 90176 were collected in the mountain region south of Dairen, Manchuria, October 5, 1930.

90169. LESPEDEZA sp.

No. 6394. A plant which made an excellent growth on poor soil.

90170. LESPEDEZA sp.

No. 6428. Plants 20 to 30 inches high.

90171. LESPEDEZA sp.

No. 6429. Plants 18 to 24 inches high, found on rather poor dry soils.

90172. LESPEDEZA sp.

No. 6431. Plants 20 to 30 inches high, found growing abundantly on poor dry soils.

90173. LESPEDEZA sp.

No. 6433. Plants 12 to 24 inches high, very leafy, and found in poor dry soils.

90120 to 90297—Continued.

90174. LESPEDEZA sp.

No. 6434. Found on poor dry soils.

90175. LESPEDEZA sp.

No. 6436. Plants 24 to 36 inches high, found growing on poor dry soils.

90176. LESPEDEZA sp.

No. 6347. Plants 20 to 30 inches high, found growing on poor dry soils.

90177. LOTUS CORNICULATUS L. Fabaceae. **Birdsfoot trefoil.**

No. 6347. Collected along the roadside near Seiryori, Chosen, September 20, 1930. A semiprocumbent plant which makes an abundant growth on very poor soil. Blossoms and mature seed were found on the same plants. The seed shatters easily. May be of value for green manure and pasture.

90178 to 90182. MEDICAGO spp. Fabaceae.

90178. MEDICAGO RUTHENICA (L.) Trautv.

No. 6378. Received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930. A wild alfalfa found growing in abundance in rocky adverse situations in northern Manchuria and Mongolia. It resembles alfalfa in its habit of growth; the main stem is sometimes 4 feet high, covered with small leaves; the outside of the pea-shaped flower is bronze, the inside deep sulphur yellow. The small 6-seeded pods, when ripe, split up the back, but the seed apparently does not fly out like many of the other legumes. This perhaps will make a hay crop; it is an excellent seed producer.

For previous introduction see 65283.

90179 to 90182. MEDICAGO SATIVA L. **Alfalfa.**

90179. No. 6323. Received from D. N. Lutz, Union College, Heijo, Chosen, September 12, 1930. Collected near Sorai Beach, Kumipo, Chosen. Said to be a wild alfalfa which grows on the cliffs near the beach and spreads by running rootstocks.

90180. No. 6369. Collected along the roadside near West Heijo (Pyengyang), Chosen, September 9, 1930.

90181. No. 6370. Received from the Hoten Shubyoen, Mukden, Manchuria, September 29, 1930. The seed is obtained from Shantung Province, China, and is sold to farmers in the Kungchuling district. It is said to be a hardy variety.

90182. No. 6191. From the road of the south wall of Chinchon, Manchuria, August 16, 1930. The procumbent plants have flowers which vary from pale blue to pinkish purple. Said to have been introduced from Russia prior to 1905.

90183 to 90187. MELILOTUS spp. Fabaceae. **Sweetclover.**

90183 and 90184. MELILOTUS OFFICINALIS (L.) Lam.

90120 to 90297—Continued.

90183. No. 6192. Collected along the road of the west wall of Chinchon, Manchuria, August 16, 1930, from leafy plants 20 to 30 inches high which have yellow flowers.

90184. No. 6201. Collected in a field on the outskirts of Heijo (Pyengyang), Chosen, August 23, 1930, from plants 5 to 6 feet high with yellow flowers. The seed was just beginning to mature.

90185 to 90187. MELILOTUS SUAVEOLENS Ledeb.

For previous introduction see 61320.

90185. No. 6304. Collected along the roadside near Taihei, Chosen, September 5, 1930, from plants 5 to 6 feet high which were quite branching and still retained their leaves, although the seed was fully mature.

90186. No. 6379. Received from M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930. A wild form of melilotus occurring in Manchuria.

90187. No. 6414. Obtained near Oshozan, Mancnuria, October 7, 1930. Only one plant was found in this section. It is about 4 feet high and a late variety, as the stump was still green.

90188. MISCANTHUS SACCHARIFLORUS (Maxim.) Hack. Poaceae. **Grass.**

No. 6389. From the Botandai hill region, Heijo (Pyengyang), Chosen, September 28, 1930.

For previous introduction see 73193.

90189. OSTERDAMIA JAPONICA (Steud.) Hitchc. Poaceae. **Japanese lawngrass.**

No. 6247. From the roadside, about 4 miles north of Chuwa, Chosen, August 27, 1930.

For previous introduction see 89387.

90190. OXYTROPIS HIRTA Bunge. Fabaceae.

No. 6077. August 4, 1930. Collected along roadsides between Daiboshin and Sukaton, Manchuria. This species makes a fair growth on poor soil. It is not very abundant in any one place. May have value as green manure or possibly pasture.

90191. PENNISETUM ALOPECUROIDES (L.) Spreng. Poaceae. **Grass.**

No. 6316. September 11, 1930. Collected about 2 miles northwest of Heijo, Chosen. This grass grows quite abundantly in waste fields and along roadsides. It is generally found on rather poor soil, and has a very good basal growth.

90192. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

No. 6285. From a farm near Heijo, Chosen, September 3, 1930. A very small reddish-brown bean which matures early.

90193 to 90198. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

90193. No. 6317. Collected about 4 miles northwest of Heijo, Chosen, September 11, 1930. This species makes a good growth on poor, rather dry soils.

90120 to 90297—Continued.

90194. No. 6333. Collected along the road near Rikiho, Chosen, September 15, 1930. A bush form with twining terminal which occurs on rather poor soil.

90195. No. 6284. Collected along a ditch on a farm near Heijo, Chosen. A vining variety which grows 6 feet high; with bright glossy green seed. It should be an excellent variety for sprouts.

90196. No. 6366. From a field near Ritsuri, Chosen, September 26, 1930. Small glossy green seed, used for bean sprouts and bean paste for batter cakes.

90197. No. 6367. From a field near Ritsuri, Chosen, September 26, 1930. Small glossy bright-green seeds, used for sprouts and batter paste for cakes.

90198. No. 6368. From a field near Ritsuri, Chosen, September 26, 1930. Small olive-green seed used for bean sprouts and batter paste for cakes.

90199 and 90200. PHASEOLUS MUNGO L. Fabaceae. Urd.

90199. No. 6269. Collected along hillsides in the Senkyori region, east of Heijo, Chosen. The plants were very vining, 3 to 4 feet long, and fairly leafy.

90200. No. 6331. From along a ditch near Ryojo, Chosen. A very vining plant found in waste places.

90201. PHRAGMITES VULGARIS (Lam.) B. S. P. Poaceae. Grass.

No. 6419. From a field near Chinchon, Manchuria. A very abundant plant, in this vicinity, which grows 3 to 4 feet high.

90202. PYRUS sp. Malaceae. Pear.

No. 6308. Pears bought at a Korean fruit stand in Heijo, Chosen. This small fruit is the wild pear which grows in the mountain districts of northern Chosen.

90203. PYRUS sp. Malaceae. Pear.

No. 6445. Purchased from fruit vendor in Nanzankai village, Manchuria, October 15, 1930. This small russet pear, less than an inch in diameter and somewhat astringent, is said to be a native wild species. Many fruits were seedless, in others the seeds were quite large. It may be of value as a rootstock for the better varieties of pear.

90204. RUBUS sp. Rosaceae. Raspberry.

No. 6246. Collected along the road north of Chuwa, Chosen, August 27, 1930. The plants were 2 to 3 feet high, with leaves white on the under side and very large, sweet, wine-red berries.

90205 to 90263. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

Nos. 90205 to 90218 were purchased from Korean grain merchants at Heijo, Chosen, August 25, 1930.

90205. No. 6224. *Irute.* A mixed yellow variety of medium size. Used boiled as food.

90206. No. 6225. *Hanka.* A mixed sample of medium-small yellow varieties. Used for sprouts and boiled for food.

90120 to 90297—Continued.

90207. No. 6226. *Hinkon.* A mixture of medium-sized greenish-yellow and yellow varieties. Used boiled for food.

90208. No. 6227. *Komujonkon.* A medium-sized oval yellow bean with a black saddle. Used boiled for food.

90209. No. 6228. *Purukon.* A medium-sized oval seal-brown bean. Used boiled for food.

90210. No. 6229. *Iwate.* A large nearly round yellow variety with light-brown hilum. Used boiled for food.

90211. No. 6230. *Irute.* A large nearly round yellow variety with a very light-brown hilum. Used boiled for food.

90212. No. 6231. *Purukon.* A large oval somewhat flattened green bean with black hilum and green germ. Used boiled for food.

90213. No. 6232. *Wankon.* A large nearly round yellow variety with light-brown hilum. Used boiled for food.

90214. No. 6233. *Nanu urukon.* A mixture of medium-small greenish-yellow and green varieties. Used for sprouts and boiled for food.

90215. No. 6248. A mixture of medium-sized yellow varieties heavily mottled with brown. Used for cattle feed.

90216. No. 6249. A mixture of medium-small to medium-sized yellow varieties. Used as cattle feed.

90217. No. 6250. A medium-large oval green bean with light-brown hilum and green germ. Used for food and also for cattle feed.

90218. No. 6251. *Umata.* A mixture of medium-small to medium-sized yellow varieties. Used for cattle feed.

Nos. 90219 to 90223 were received from the Heian Nando Prefecture Grain Inspection Office, Heijo, Chosen, August 29, 1930.

90219. No. 6252. Native varieties of soybeans (fourth grade). Mixed yellow-seeded varieties of medium size. Used for making soy sauce, miso, and bean curd.

90220. No. 6253. *Heijo.* (Third grade.) A medium-sized yellow variety used for miso, soy sauce, and bean curd.

90221. No. 6254. *Oriorkon.* Excellent grade, medium large oval yellow bean with pale hilum. Used for bean curd, miso, natto, and soy sauce.

90222. No. 6255. *Heijo.* A pure sample of medium-sized oval yellow beans with pale hilum. Used for bean curd, miso, soy sauce, and natto.

90223. No. 6256. A native variety; medium-large oval yellow bean with pale hilum. Used for miso, soy sauce, and bean curd.

Nos. 90224 to 90227 were obtained from a grain merchant's storage yard along the Daido River, Heijo, Chosen, August 30, 1930.

90120 to 90297—Continued.

90224. No. 6257. *Kokusan.* Medium-sized oval glossy yellow beans with pale hilum and a slight admixture of other yellow varieties. Used for soy sauce, miso, and bean curd.

90225. No. 6258. *Heijo.* A medium-sized oval glossy yellow bean with pale hilum. Used for miso, bean curd, and soy sauce.

90226. No. 6259. *Heijo.* (First grade.) A medium-sized oval glossy yellow bean with pale hilum. Used for bean curd, soy sauce, and miso.

90227. No. 6260. *Kawakanni.* A mixture of medium-small to medium-sized yellow varieties.

Nos. 90228 to 90234 were purchased at a Korean grain store, Heijo, Chosen, August 20, 1930.

90228. No. 6262. *Purukon.* A medium-sized oval greenish-yellow variety.

90229. No. 6263. *Pakute.* A medium-sized oval glossy yellow variety with pale hilum. Used for miso, soy sauce, and bean curd.

90230. No. 6264. *Chokoman.* A mixture of medium-small to medium-sized oval yellowish-green varieties. Used for cattle feed.

90231. No. 6265. *Kunkon.* A medium-sized oval greenish-yellow bean with brown hilum. More or less mottled.

90232. No. 6266. *Chokomankon.* A medium-small oval slightly flattened greenish-yellow bean with reddish-brown hilum. More or less mottled with brown.

90233. No. 6267. *Jojunge.* A mixture of large oval yellow beans with black hilum and large green beans. Used for miso and soy sauce.

90234. No. 6268. *Jerukunkon.* A large nearly round glossy yellow bean with light-brown hilum. Used for bean curd, miso, and soy sauce.

Nos. 90235 to 90250 were received from a grain merchant's warehouse, Chinampo, Chosen, September 4, 1930.

90235. No. 6288. *Shinsen.* A medium-sized oval black bean marked with brown in concentric rings. Used by the Koreans for cooking with millet or rice.

90236. No. 6289. *Chotan.* Improved chotan grown by the Chosen Kogyo Farm Co., Kokaido, Chosen. A medium-sized oval glossy yellow bean with pale hilum. Exported to Japan for bean curd.

90237. No. 6290. *Chuwa.* A medium-sized oval glossy yellow variety. Used for soy sauce in Japan.

90238. No. 6291. *Heijo.* (First grade.) Medium to medium large oval glossy yellow beans which are exported to Japan for food.

90239. No. 6292. *Ankaku.* A medium-sized oval glossy yellow variety; exported to Japan for miso and soy sauce.

90240. No. 6293. *Koshu.* (First grade.) A large oval glossy yellow bean with pale hilum; exported to Japan for food.

90120 to 90297—Continued.

90241. No. 6294. *Hakuta otsu.* A large oval light-yellow bean with pale hilum; exported to Japan for making confections.

90242. No. 6295. *Shinsen.* Medium-small to medium-sized glossy yellow beans with hilums ranging from pale to brown. They are exported to the main island of Japan for bean curd.

90243. No. 6296. *Koshu.* A medium-sized oval glossy yellow bean with pale hilum; exported to Japan for bean curd.

90244. No. 6297. *Koshu.* Medium-small to medium-sized oval glossy yellow beans; exported to Japan for making bean curd.

90245. No. 6298. *Neihen.* Medium-small to medium-sized glossy yellow beans; exported to Japan for miso and soy sauce.

90246. No. 6299. *Kokaido.* A medium-sized oval glossy yellow bean with pale hilum; exported to Japan for bean curd.

90247. No. 6300. *Koshu.* (Third grade.) Medium-small to medium-sized yellow beans; used for bean curd.

90248. No. 6301. *Kostin.* A medium-sized oval glossy yellow bean with pale hilum; used for miso and soy sauce.

90249. No. 6302. *Neihen.* (Second grade.) A medium-sized oval yellow variety; exported to Japan for bean curd.

90250. No. 6303. *Koshu.* This bean was originally received from the Meiji Agricultural Society farm at Kokaido. A medium-sized oval glossy yellow bean with pale hilum; exported to Japan for making confections.

Nos. 90251 and 90252 were obtained at the Korean grain market, Keijo, Chosen, September 20, 1930.

90251. No. 6345. A very small nearly round yellow bean with brown hilum, said to be used for sprouting.

90252. No. 6346. *Chonkon.* A mixture of medium-small yellow-seeded varieties, used for cattle feed.

Nos. 90253 to 90257 were collected in farm fields near Ritsuri, Chosen, September 23 and 26, 1930.

90253. No. 6357. Plants 30 to 36 inches high with many branches which are slightly vining at the ends. The seed is medium-sized oval glossy yellow with pale hilum.

90254. No. 6358. Plants 30 to 36 inches high with many branches. The seed is medium small, slightly flattened, and yellowish brown.

90255. No. 6359. The plants are bushy, very branching, and prolific. The seed is medium sized oval glossy yellow, with pale hilum.

90256. No. 6364. Medium-small oval bright-yellow seed, with light-brown hilum.

90257. No. 6365. Medium-small oval yellow seed, with brown hilum.

90120 to 90297—Continued.

90258. No. 6371. From a farm field near Kaiynan, September 30, 1930. Seed from stray plants of yellow variety. Plants erect, many stems, and very prolific. Excellent forage variety.

Nos. 90259 and 90260 were obtained from a farmer near Chinchon, October 7, 1930.

90259. No. 6399. Medium-small oblong much flattened black seed marked with brown in concentric rings. The leaves persist when the pods are fully mature. It is used for forage.

90260. No. 6400. Medium-sized oval slightly flattened light-green seed with brown hilum and green germ. It is used for food.

90261. No. 6351. Collected along the roadside near Heijo, September 22, 1930. Slender very vining plants with very small sooty-black seed. The pods shatter very easily. It was found growing abundantly in waste places.

90262. No. 6403. Collected from wild plants found in a small valley near Makaton, Manchuria, October 7, 1930. The small oblong seeds are much flattened and dull black.

90263. No. 6401. Obtained from a farmer near Makaton, October 7, 1930. This bean is used for forage, as the leaves persist when the pods are fully ripe. The small oblong seeds are black.

90264. SOPHORA sp. Fabaceae.

From plants 30 to 36 inches high, growing along the rocky hillside north of Chuwa, Chosen, August 27, 1930. They were growing in rather poor soil, and may be of value for green manure.

90265. SOPHORA sp. Fabaceae.

From the mountain region south of Dairen, Manchuria, October 15, 1930. Plants 24 to 30 inches high which made an abundant growth on poor soil.

90266 to 90271. SORGHUM VULGARE Pers. Poaceae.

90266. No. 6305. Kaoliang sorghum collected in a farmer's field near Taihei, Chosen, September 5, 1930. An early variety which has just been harvested.

90267. No. 6341. Collected in a Korean farmer's field near Ritsuri, Chosen, September 16, 1930. This is a different variety of kaoliang from any seen in the farming regions in this section.

Nos. 90268 to 90271 were single heads of broomcorn kaoliang obtained from a farm near Nanzan village, Manchuria, October 11, 1930. The seed is used for food and the head, or panicle, for brooms.

90268. No. 6420. 90270. No. 6422.

90269. No. 6421. 90271. No. 6423.

90272 to 90274. SPODIOPOGON spp. Poaceae. **Grass.**

90272. SPODIOPOGON COTULIFER (Thunb.) Hack.

No. 6353. Collected near Ritsuri, Chosen, September 23, 1930. A grass 3 to 4 feet high, growing on rather poor land.

90120 to 90297—Continued.

90273. SPODIOPOGON COTULIFER (Thunb.) Hack.

No. 6386. Collected in the Botandai hill region, Heijo, Chosen, September 28, 1930. This grass makes an excellent growth about 4 feet high, but is somewhat stiff and coarse.

90274. SPODIOPOGON SIBIRICUS Trin.

No. 6387. Collected in the Botandai hill region, Heijo, Chosen, September 28, 1930.

90275. SYRINGA sp. Oleaceae. **Lilac.**

No. 6314. From the forestry garden of the Shariin Agricultural School, Shariin, Chosen, September 10, 1930. A purple-flowered native Korean lilac.

90276 to 90278. TRIFOLIUM LUPINASTER L. Fabaceae. **Clover.**

90276. No. 6337. Collected in the hill section near Ritsuri, Chosen, September 16, 1930. A plant which grows abundantly on poor soil. A late variety, as the seed is just beginning to mature.

90277. No. 6361. Collected along roadside near Chuwa, Chosen, September 25, 1930. A procumbent clover which makes a thick growth.

90278. No. 6373. Obtained through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, October 2, 1930. This species makes an excellent growth at the experiment station.

90279. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 6261. From Heijo, Chosen, August 30, 1930. Native Korean wheat obtained at a Korean grain merchant's storage yard along the Daido River.

90280 to 90289. VICIA spp. Fabaceae. **Vetch.**

90280 to 90285. VICIA AMOENA Fisch.

90280. No. 6334. Collected along the road near Rikiho, Chosen, September 15, 1930. This vetch occurs abundantly throughout this section and is said to be a perennial form. It makes an abundant growth and should be of value for green manure and forage.

Nos. 90281 to 90283 were collected along gullies in the mountain region south of Dairen, Manchuria, October 15, 1930.

90281. No. 6393. This species makes an excellent growth and is found abundantly in this section, but it is late in maturing.

90282. No. 6430. Plants over 3 feet high, which make an abundant growth.

90283. No. 6440. Plants 3 to 4 feet high, which make an abundant growth on poor soil.

Nos. 90284 and 90285 were received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station, Kungchuling, Manchuria, October 2, 1930. They are hardy perennial vetches which give two cuttings yearly at the experiment station, where they are used as forage.

90120 to 90297—Continued.

90284. No. 6377. 90285. No. 6372.

90286. VICIA CRACCA L. **Cow vetch.**

No. 6376. From Kungchuling, Manchuria, October 2, 1930. Received through M. Kosai, forage-crop expert, South Manchurian Railway Experiment Station.

90287. VICIA PSEUDO-OROBUS Fisch. and Mey.

No. 6404. Collected in the mountainous region near Oshozan, Manchuria, October 7, 1930. A wild vetch, not very abundant; looks promising for forage and green manure.

90288. VICIA sp.

No. 6326. From Ryojo, Chosen, September 13, 1930. A vetch which occurs abundantly along hillsides and other waste places; a late variety, as the seed is just beginning to mature.

90289. VICIA sp.

No. 6322. From Heijo, Chosen, September 12, 1930. Received from D. N. Lutz, Union Christian College, who collected it near Heijo about June 1 from plants 18 to 24 inches high.

90290 and 90291. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

90290. No. 6321. From a field near Jidori, Chosen, September 12, 1930. Plants of erect bushy habit and very prolific. The medium-small white seed has a brown eye.

90291. No. 6332. Collected west of Heijo, Chosen, September 11, 1930. A small oblong light-tan cowpea found in waste places.

90292. VITIS sp. Vitaceae. **Grape.**

No. 6287. Purchased at a small Korean market on the outskirts of Heijo, Chosen, September 3, 1930. A native variety which grows wild in Chosen. The small black grapes in fair-sized bunches are rather sour.

90293 to 90296. ZEA MAYS L. Poaceae. **Corn.**

Nos. 90293 to 90295 are native varieties obtained from a Manchurian farmer near Makaton, Manchuria, October 7, 1930.

90293. No. 6396.

90294. No. 6397.

90295. No. 6398.

90296. No. 6443. A native variety obtained from a farm near Shanshubo, Manchuria. The grain is yellow, 20 rows per ear, butt end 7 inches in circumference, tip over 4 inches in circumference, ear 7 inches long.

90297. ZIZIPHUS JUJUBA Mill. Rhamnaceae. **Jujube.**

No. 6409. Small round brownish fruit, collected from small shrubs 2 to 3 feet high in the mountain region near Oshozan, Manchuria, October 7, 1930.

90298 to 90316.

From Nancy, France. Plants purchased from Messrs. V. Lemoine & Son. Received November 22, 1930.

90298 to 90316—Continued.

90298. ABELIA FLORIBUNDA (Mart. and Gal.) Decaisne. Caprifoliaceae.

A shrub 6 to 10 feet high with oblong to ovate ciliate entire leaves 1 inch long and terminal cymes of tubular red-purple flowers nearly 2 inches long. It is native to Mexico.

90299. ABELIA TRIFLORA R. Br. Caprifoliaceae.

A shrub, native to the Himalayas, up to 15 feet high, with corrugated bark, ovate-lanceolate leaves 2 to 3 inches long, and terminal clusters of rosy white fragrant flowers.

For previous introduction see 76552.

90300 to 90302. ARUNDINARIA spp. Poaceae. **Bamboo.**

90300. ARUNDINARIA ANGULATA (Munro) Porterfield. **Square bamboo.**

This bamboo takes its name from the distinctly 4-sided shape which the culms of the larger sizes assume. Small culms show this character little or not at all. According to Mitford, the species grows to a height of 30 feet near Osaka, Japan. Stout spines are said to form at the lower nodes. The mature culms are reported to be exceedingly tough and hard and to have been much in demand for walking sticks among the Buddhist monks. An old Chinese record states that the young shoots of this bamboo were prized above those of all others as an esculent. There are five to eight rather thin leaves on a branchlet of a small plant. The secondary veins are three to four on each side of the midrib and the intermediate veins four to five.

90301. ARUNDINARIA sp.

Received as *Bambusa Kan Tsiku*. The small plant of this bamboo received has medium-green leaves, four to six on a branch, and up to 2¼ inches long by ⅜ inch wide. The internodes of the branches are quite short, which crowds the leaves together and gives a distichous appearance to the foliage. There are three pairs of secondary veins, with four to seven intermediates. The tessellation is rather open.

90302. ARUNDINARIA MURIELAE Gamble.

A handsome bamboo understood to grow to a height of 10 to 15 feet. It is reported to produce dense masses of culms, which is unusual for hardy bamboos. The culms turn to a rich yellow with age, and there are one to many branches at the nodes. On small plants the branches bear two to three leaves up to 2¾ inches long by $\frac{1}{16}$ inch wide. There are usually three pairs of secondary veins, and the intermediates are five to eight. The tessellation is rather close.

90303. BERBERIS SARGENTIANA C. Schneid. Berberidaceae. **Sargent barberry.**

A black-berried barberry from western Hupeh, China, which reaches a height of 7 feet. This is the only evergreen barberry which has proved entirely hardy at the Arnold Arboretum, Jamaica Plain, Mass.

For previous introduction see 63338.

90298 to 90316—Continued.

90304 to 90310. CEANOTHUS DELILIANUS Spach. Rhamnaceae.

90304. *Croix du Sud.* A deep slaty blue.

90305. *Elegans.* A bright mauve rose.

90306. *Esperanto.* Large panicles of gray-lilac flowers.

90307. *Reverie.* Broad clusters of iron-blue flowers.

90308. *Saphir.* Of deepest steel-blue color.

90309. *Topaze.* As hardy as Gloire de Versailles, with deep-blue flowers.

90310. *Victor Jouin.* A dark blue dwarf.

90311 to 90313. CLEMATIS GRATA Wall. Ranunculaceae. **Himalayan clematis.**

90311. *Campanile.* A handsome variety, carrying tall panicles of hyacinth-shaped light azure-blue flowers.

90312. *Côte d'Azur.* A variety with glossy foliage, as in *C. tubulosa,* and panicles of deep-azure flowers which form small pyramids along all the branches.

90313. *Oiseau bleu.* A variety with small foliage; the upper part of the clump is wholly covered with very light and elegant forked panicles of azure flowers which fade to pale pink lilac. When the flowers first open they are like hyacinths, but later become starlike in form.

90314. JASMINUM GRACILLIMUM Hook. f. Oleaceae. **Slender jasmine.**

A climbing or scrambling hairy shrub from Borneo. The opposite, narrow-ovate leaves are bright green above and pubescent beneath, and the fragrant white flowers, 1 inch across, are in large dense hanging heads.

90315. JASMINUM NITIDUM Skan. Oleaceae. **Jasmine.**

A shrub with slender branchlets, elliptical-lanceolate leaves 3 to 4 inches long, paler beneath, and few-flowered cymes of fragrant white flowers 1 inch long. It is native to the Admiralty Islands.

90316. SYRINGA SWEGINZOWII Koehne and Ling. Oleaceae. **Chengtu lilac.**

Variety *albida.* A hybrid between *S. sweginzowii superba* and *S. wilsonii* which develops tall slender dark-bronze stems and, in May, bears a profusion of rather large long-tubed very sweet-scented flowers with reflexed lobes of delicate pale pink to white.

90317 and 90318. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Chosen and Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received November 22, 1930.

90317. GOSSYPIUM sp.

No. 6352. From a small field near Ritsuri, Chosen, September 23, 1930.

90318. GOSSYPIUM sp.

No. 6424. From a small field near Nanzankai village, Manchuria, October 10, 1930. Said to be a native variety.

90319 to 90324.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. Received November 24, 1930.

90319. PAROSELA SEEMANNI (S. Wats.) Rose. Fabaceae.

No. 279. Obtained in an agave field at Zontecomate, Hidalgo, November 7, 1930. A diffusely branched shrub with smooth gray bark, leaves 1 to 2 feet long, composed of 5 to 11 leaflets, and loose racemes of pinkish-purple flowers terminating the leafy branchlets.

90320. COLOGANIA AFFINIS Mart. and Gal. Fabaceae.

No. 320. Collected over a mile southeast of Amecameca, State of Mexico, November 10, 1930. An evergreen climber growing on rich loam at an altitude of 7,800 feet.

90321. LUPINUS sp. Fabaceae. **Lupine.**

No. 316. Collected southeast of Amecameca, State of Mexico, November 10, 1930. A plant 1 to 5 feet high, with purple flowers, found growing in cornfields at 8,000 feet altitude.

90322. MONNINA SCHLECHTENDALIANA D. Dietr. Polygalaceae.

No. 201a. From west of Tres Marias, Morelos, about 32 miles from Mexico City, October 29, 1930. A plant 6 to 9 feet high, with small deep-purple flowers and black berries.

90323. PENTSTEMON CAMPANULATUS (Cav.) Willd. Scrophulariaceae. **Beardtongue.**

No. 285. Collected southeast of Real del Monte, Hidalgo, November 6, 1930. A plant with purple flowers and seeding abundantly, found in open woods on the mountain side.

90324. SEDUM MORANENSE H. B. K. Crassulaceae. **Stonecrop.**

No. 283. Collected southeast of Real del Monte, Hidalgo, November 6, 1930. A fleshy plant found in rocky crevices on a bare peak.

90325 to 90329. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From Norway. Seeds presented by Haakon Foss, Director, Loken Agricultural Experiment Station, Loken, Valdres. Received November 26, 1930.

90325. No. 1. Seed from a number of selected plants.

90326. No. 2. A local mountain strain, tested and grown for several years at this station.

90327. No. 3. A local mountain strain.

90328. No. 4. *Finnish.* A very hardy and long-lived strain which has been grown for several years at the station.

90329. No. 5. A strain developed at the station.

90330 to 90333. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From Finland. Seeds presented by Otto Walle, Plant Breeding Station, Tammisto. Received November 26, 1930.

Seeds taken from single plants growing in the trial field.

90330 to 90333—Continued.

90330. *Ilmajoki.*

90331. *Kauhajoki.*

90332. *Kauvatsa.*

90333. *Nakkila.*

90334 to 90423.

From Chihli Province, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received November 26, 1930.

90334. ACER PICTUM MONO (Maxim.) Pax. Aceraceae. **Maple.**

No. 7295. From the mountain side above the Chieh Tai Ssu Temple. A maple which bears 3-pointed to 5-pointed leaves. It is well worthy of a trial as an ornamental.

For previous introduction see 75666.

90335. ACTINOSTEMMA LOBATUM Maxim. Cucurbitaceae.

No. 7292. From the mountain side near the Chieh Tai Ssu Temple, September 28, 1930. A vine which produces interesting oblong fruits about an inch in length.

For previous introduction see 65500.

90336. ASTRAGALUS MELILOTOIDES Pall. Fabaceae. **Milkvetch.**

No. 7318. Collected near the Tau Chou Ssu Temple, about 50 miles from Peiping, September 30, 1930. A white or lavender-flowered melilotus, found growing near the tops of very rocky mountains where the soil is very thin.

90337. ASTRAGALUS sp. Fabaceae. **Milkvetch.**

No. 7043. From Peiping, August 30, 1930. A milkvetch with flat pods, collected east of the Temple of Heaven.

90338. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Waxgourd.**

No. 7315. From the Tau Chou Ssu Temple, September 30, 1930. This Chinese winter gourd weighed 20 pounds and was 15 inches long and 10 inches across. The rind, rather deep green on the outside, fading to almost white, was covered with a white bloom. The flesh, about 1 inch thick, is white and fluffy in appearance and is used by the Chinese in meat pies, soups, and in other ways.

90339. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Waxgourd.**

No. 7316. A winter gourd which weighed 30 pounds; it was over 12 inches in diameter and 14 inches long. The rind was light green and the white flesh 1 inch thick.

90340. CANARIUM ALBUM (Lour.) DC. Balsameaceae.

No. 7326. From Peiping, October 4, 1930. Purchased from a fruit vendor, but originally from Fukien Province, where it is known as the southern olive.

For previous introduction see 72886.

90341. CARAGANA sp. Fabaceae. **Pea-shrub.**

No. 7288. From the mountain side near Chieh Tai Ssu Temple, September 28, 1930. A shrubby thorny plant with small leaves and small rather long seed pods. This probably would make a good hedge plant.

90334 to 90423—Continued.

90342. CARAGANA sp. Fabaceae. **Pea-shrub.**

No. 7321. From the small canyons on the rocky mountain side near the Tau Chou Ssu Temple, September 20, 1930. Appears to be the same as No. 7288 [90341].

90343. CARPINUS TURCZANINOVII Hance. Betulaceae. **Hornbeam.**

No. 7298. From the mountain side near the Chieh Tai Ssu Temple, September 28, 1930. A tree over 16 inches in diameter and 35 to 40 feet high, known locally as mountain elm.

90344. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

No. 7314. Chinese name western gourd. From the Tau Chou Ssu Temple, September 30, 1930. A very hard-shelled greenish-yellow squash 10 inches long and over 6 inches in diameter. The light creamy yellow flesh, more than an inch thick, looks pitted. The Chinese use this squash in soups and meat pies, and the seeds are dried and eaten like watermelon and pumpkin seeds.

90345. EUONYMUS sp. Celastraceae.

No. 7405. From Peiping, October 15, 1930. A plant growing on the inside wall of the east moat about the ancestral hall in the Temple of Heaven grounds. When the seeds are ripe the pods turn a beautiful pink and open from below, usually into four parts, and expose the bright-red arils of the seeds. The leaves are light green with pink petioles, the pink color extending part way up the midrib.

90346. FRAXINUS CHINENSIS RHYNCHOPHYLLA (Hance) Hemsl. Oleaceae. **Ash.**

No. 7297. From the mountain side near the Tau Chieh Ssu Temple grounds, September 28, 1930. An attractive young tree 8 inches or more in diameter and 40 to 50 feet high, with clusters of very long narrow light greenish yellow winged seed.

90347 to 90349. GLEDITSIA SINENSIS Lam. Caesalpiniaceae. **Chinese honeylocust.**

For previous introduction see 63184.

Nos. 90347 and 90348 were collected at the Hsiang Chieh Ssu Temple, Patachu, in the Western Hills, September 26, 1930.

90347. No. 7027. The soap-pod tree.

90348. No. 7263. Tree 6 inches in diameter and 18 feet tall, growing on a dry rocky mountain side. The pods are 9 to 10 inches long, straight and flat, and over 1 inch wide; the beans are much finer than No. 7027 [90347], shorter and almost round.

90349. No. 7403. Collected near Tau Chieh Ssu Temple, in the Western Hills, about 20 miles southwest of Peiping, September 29, 1930. The pods of this tree were 9 inches long.

90350 to 90363. LESPEDEZA spp. Fabaceae. **Bushclover.**

90350. LESPEDEZA STIPULACEA Maxim.

No. 7262. From Patachu, September 26, 1930. Low-growing plants from

90334 to 90423—Continued.

the grounds of the Western Hills hotel. This may be the same as that collected at Chinglungchiao, No. 7234 [89744].

90351. LESPEDEZA STIPULACEA Maxim.

No. 7320. Near Tau Chou Ssu Temple, September 30, 1930. Collected on rocky mountain side on very poor thin soil. This is the same as No. 7262 [90350], collected at Patachu. It may be slightly different on account of the different soil conditions.

90352. LESPEDEZA sp.

No. 7257. From Peiping, September 23, 1930. A more or less prostrate or creeping bushclover with small leaves; growing near the altar of the Temple of Heaven.

90353. LESPEDEZA sp.

No. 7260. From Peiping, September 24, 1930. A more or less prostrate form, found in a temple courtyard back of Coal Hill.

90354. LESPEDEZA sp.

No. 7264. Collected above the Cheng Kuo Ssu Temple, near Patachu, Western Hills, September 26, 1930. A single plant, branched at the ground, very shrubby, with small leaves 1 inch long, collected on the mountain side.

90355. LESPEDEZA sp.

No. 7319. From Tau Chou Ssu Temple, September 30, 1930. A thin stout-stemmed decumbent or creeping lespedeza with yellowish-brown seed, borne primarily in small clusters in the axils of the leaves. The plant is quite common and grows on rocky mountain sides on poor thin soil. This resembles No. 7260 [90353] from Coal Hill.

90356. LESPEDEZA sp.

No. 7323. From the mountain side near Tau Chou Ssu Temple, September 30, 1930. A rather common, very narrow-leaved lespedeza, inclined to be shrubby.

Nos. 90357 to 90363 were collected at Peiping, October 13, 1930.

90357. LESPEDEZA sp.

No. 7362. Plants growing between the paving stones on the top of the city wall, along the west.

90358. LESPEDEZA sp.

No. 7364. A creeping or more or less decumbent type, collected along the drive at the Ming Tombs.

90359. LESPEDEZA sp.

No. 7365. Collected at the Tangshan hot springs, 25 miles from Peiping.

90360. LESPEDEZA sp.

No. 7366. This lespedeza appears to be quite shrubby, with deep-purple flowers; it was almost eaten up by sheep.

90361. LESPEDEZA sp.

No. 7367. A shrubby type which seeds heavily and is more or less decumbent.

90334 to 90423—Continued.

90362. LESPEDEZA sp.

No. 7368. A rather shrubby, variety with small narrow leaves; collected in dry situations at the Ming Tombs.

90363. LESPEDEZA sp.

No. 7369. A small-leaved upright more or less shrubby variety.

90364. MALUS sp. Malaceae.

No. 7370. Purchased at Tangshan, near Peiping, October 13, 1930. A small red crab apple less than 1 inch in diameter; grown in the Western Hills.

90365. MEDICAGO RUTHENICA (L.) Trautv. Fabaceae.

No. 7119. From the park near the hotel at Tangshan, near Peiping, October 13, 1930.

For previous introduction and description see 90178.

90366 to 90384. PHASEOLUS spp. Fabaceae.

90366 to 90374. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

90366. No. 7331. Near the village of Lotonwen, between Peiping and Tengtai, October 8, 1930. A deep bright red, locally grown variety.

90367. No. 7358. From Yangtsun, near Tientsin, October 9, 1930. A bean commonly grown in this vicinity.

Nos. 90368 to 90370 were purchased October 13, 1930, from a dealer at Tunkkungmao, outside of Peiping, en route to Tanshan.

90368. No. 7374. A rather dull-gray or almost white bean.

90369. No. 7375. A green and black mottled bean.

90370. No. 7376.

90371. No. 7389. Received from a farmer at Pingfang, about halfway from Peiping to Tangshan, October 14, 1930. A green and brown mottled bean.

Nos. 90372 and 90373 were collected at the village of Chanping, about halfway between Tangshan and the Ming Tombs, October 13, 1930.

90372. No. 7396. A creamy white variety.

90373. No. 7397. A red variety.

90374. No. 7332. Received from a farmer at the village of Lotonwen, between Peiping and Fengtai, October 8, 1930. A locally grown, gray variety.

90375 to 90382. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

90375. No. 7333. From Lotonwen, October 8, 1930. A fairly large dull-brown bean picked out of sample No. 7332 [90374]. This seems to be a different variety entirely.

90376. No. 7349. From Enchihon, Tientsin, October 9, 1930. This is said to be an exceptional strain of mung bean. When used with rice it makes a green-colored gruel, while all other varieties are said to turn the gruel a dark color.

90334 to 90423—Continued.

90377. No. 7361. From Yangtsun, near Tientsin, October 9, 1930. A dull-green variety.

90378. No. 7373. From Tunghungmao, near Peiping, October 14, 1930. A somewhat mixed sample of smooth bright-green beans.

Nos. 90379 to 90381 were collected at Pingfang, about halfway between Peiping and Tangshan, October 13, 1930.

90379. No. 7388. A dull-green variety.

90380. No. 7390. A dull-brown variety.

90381. No. 7391. Black and green mottled beans taken from No. 7389 [90371].

90382. No. 7395. October 3, 1930. From Changping. A dull-green variety.

90383 and 90384. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

Collected at Lotanwen, October 8, 1930.

90383. No. 7337. A white garden bean.

90384. No. 7338. A pale yellowish-brown oblong bean, grown as a vegetable.

90385. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 7394. From Changping village, between Tangshan and the Ming Tombs, October 13, 1930. A rather small to medium-sized field pea; yellow with a greenish tinge.

90386 to 90407. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 90386 to 90390 were collected from a farmer at Lotonwen, between Peiping and Fengtai, October 8, 1930. Locally grown under valley conditions.

90386. No. 7340. A medium-sized yellow bean with a conspicuous brown hilum.

90387. No. 7341. A medium-sized oblong flattened black bean.

90388. No. 7342. A large round bright-green bean with a black hilum.

90389. No. 7343. A mixed sample of light-yellow and light-green varieties, some with mottling. They are interesting-looking seeds.

90390. No. 7344. From vines growing on reeds. The vines here climb to the top of reeds, 10 feet or more. Some of these wild soybeans look larger and different from those collected in 1925–26.

Nos. 90391 to 90393 were collected at Enchihon, Tientsin, October 9, 1930.

90391. No. 7351. A mixed sample of green beans with green germ.

90392. No. 7352. A sample of the commercial run of beans in this locality.

90393. No. 7353. A rather small oblong flattened black bean.

90334 to 90423—Continued.

Nos. 90394 to 90396 were collected at Yangtsun, near Tientsin, October 9, 1930.

90394. No. 7354. A somewhat mixed sample of green beans with white or creamy yellow germ.

90395. No. 7355. A mixed sample of various-sized green beans with green germ.

90396. No. 7356. A mixed sample.

90397. No. 7377. Purchased from a dealer outside of Peiping, en route to Tangshan, October 13, 1930. A rather small oblong flattened black bean.

90398. No. 7378. From Tunghuingmao, near Peiping, October 13, 1930. A mixed sample of medium-small to large green beans, some are splotched with black, some almost round, others oblong, more or less flattened; hilum rather large and conspicuous; germ green.

Nos. 90399 to 90402 were collected at Tangshan, October 13, 1930.

90399. No. 7379. A medium-large oblong flattened black bean. This is a representative sample and is said to be locally grown.

90400. No. 7380. A green bean, somewhat irregular in size and shape; germ, green.

90401. No. 7381. A yellow bean.

90402. No. 7385. A medium-sized, somewhat irregular bean.

Nos. 90403 and 90404 were collected at Pingfang, about halfway between Peiping and Fangshan, October 13, 1930.

90403. No. 7392. A medium-sized oblong flat black bean; germ, white.

90404. No. 7393. A rather small, more or less oblong green bean.

Nos. 90405 to 90407 were collected at Changping, about halfway between Tangshan and the Ming Tombs, October 13, 1930.

90405. No. 7400. A medium-sized green bean.

90406. No. 7401. A medium-sized oblong flattened black bean.

90407. No. 7402. A mixed sample of very large flat oblong yellow beans.

90408. SPIRAEA DASYANTHA Bunge. Rosaceae. **Spirea.**

No. 7286. From the mountain side near Chieh Tai Ssu Temple, September 28, 1930. A shrub 4 to 6 feet high with 3-lobed to 5-lobed leaves 1 inch long, bluish green beneath, and small umbels of white flowers. It is native to Japan.

90409. SYRINGA sp. Oleaceae. **Lilac.**

No. 7296. From the mountain side near Chieh Tai Ssu Temple, September 28, 1930. A small tree over 15 feet high, growing in the wild.

90410. THLADIANTHA DUBIA Bunge. Cucurbitaceae.

No. 7258. Tubers of this plant were introduced under the Dorsett number 7044. For description see 89389.

90334 to 90423—Continued.

90411. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 7382. Collected at Tangshan village, about 20 miles northwest of Peiping, October 13, 1930.

90412. VICIA FABA L. Fabaceae. **Broadbean.**

No. 7339. From near the village of Lotonwen, between Peiping and Fengtai, October 8, 1930.

90413 to 90423. VIGNA spp. Fabaceae.

90413. VIGNA SESQUIPEDALIS (L.) Fruwirth. **Asparagus-bean.**

No. 7334. Near the village of Lotonwen, between Peiping and Fengtai, October 8, 1930. A reddish-brown bean with a rather conspicuous hilum; grown as a vegetable.

90414 to 90423. VIGNA SINENSIS (Torner) Savi. **Cowpea.**

Nos. 90414 and 90415 were collected at Lotonwen, October 8, 1930.

90414. No. 7335. A yellowish cowpea, mottled with brown.

90415. No. 7336.

90416. No. 7350. Collected at Enchihon, Tientsin, October 8, 1930. A brownish or terra-cotta bean mottled with a deeper brown. This is quite generally grown in the vicinity of Peiping.

Nos. 90417 and 90418 were collected at Yangtsun near Tientsin, October 9, 1930.

90417. No. 7359. A dark-pink to red cowpea.

90418. No. 7360. A cowpea with a brown hilum.

Nos. 90419 and 90420 were collected at Tunghungmao, near Peiping, October 13, 1930.

90419. No. 7371. A red or pink variety, quite commonly grown in the vicinity of Peiping.

90420. No. 7372. A white and red or pink mottled cowpea, commonly grown in this vicinity.

90421. No. 7387. Collected at the village of Pengfang, about halfway between Peiping and Tangshan, October 13, 1930. A red cowpea.

Nos. 90422 and 90423 were collected at Changping, about halfway between Tangshan and the Ming Tombs, October 13, 1930.

90422. No. 7398. 90423. No. 7399.

90424 to 90447.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Max Souviron, Bureau of Plant Industry. Received December 1, 1930.

90424. CASTILLEJA ARVENSIS Cham. and Schlecht. Scrophulariaceae. **Paintedcup.**

No. 324. Collected southeast of Amecameca, State of Mexico, at 7,800 feet altitude, November 10, 1930. A shrubby ornamental 6 to 20 inches high with inconspicuous flowers but brilliant-red bracts, found growing in a cornfield.

90424 to 90447—Continued.

90425. COSMOS sp. Asteraceae.

No. 376. From Boca del Monte, Puebla, November 17, 1930, at 8,000 feet altitude. A plant 10 to 15 inches high with yellow petals, tipped with white, found growing in an open pasture.

90426 and 90427. CRACCA spp. Fabaceae.

90426. No. 400. Collected in a gorge, southeast of Nogales, Vera Cruz, November 19, 1930. A herbaceous vine found at an altitude of 5,000 feet.

90427. No. 404. From Nogales, Vera Cruz, November 19, 1930. A herbaceous vine found along a creek at 4,000 feet altitude.

90428. ERYTHRINA sp. Fabaceae. **Coraltree.**

No. 410. From Nogales, Vera Cruz, along the Rio Blanco, November 19, 1930. A tree about 30 feet high found at an altitude of 4,000 feet.

90429. PASSIFLORA ADENOPODA Moc. and Sesse. Passifloraceae.

No. 349. Collected 3 miles north of Tenancingo, State of Mexico, November 13, 1930, at 8,400 feet altitude. A passiflora with purplish-black fruits.

90430 to 90440. PHASEOLUS spp. Fabaceae.

90430. PHASEOLUS ADENANTHUS G. Meyer.

No. 306. From the crater west of San Rafael, at 8,000 feet altitude, November 10, 1930. A herbaceous vine.

90431. PHASEOLUS COCCINEUS L. **Scarlet Runner bean.**

No. 428. From the market of Xochimilco. Distrito Federal, November 15, 1930.

90432 to 90440. PHASEOLUS VULGARIS L. **Common bean.**

From the market of Xochimilco, Distrito Federal, November 15, 1930.

90432. No. 424. 90437. No. 430.
90433. No. 425. 90438. No. 431.
90434. No. 426. 90439. No. 432.
90435. No. 427. 90440. No. 433.
90436. No. 429.

90441 to 90444. SOLANUM spp. Solanaceae.

90441. SOLANUM sp.

No. 310. For introduction of tubers and description, see 89687.

90442. SOLANUM sp.

No. 332. For introduction of tubers and description, see 89914.

90443. SOLANUM sp.

No. 344. For introduction of tubers and description, see 89918.

90444. SOLANUM sp.

No. 264. Collected at Tenancingo, State of Mexico, along the roadside, November 13, 1930. Fruits green with a mottling of purplish green.

90424 to 90447—Continued.

90445. TIGRIDIA sp. Iridaceae. **Tigerflower.**

No. 177. Collected near Nogales, Vera Cruz, October 24, 1930, in a gorge north of town at an altitude of 6,000 feet.

90446. TRIFOLIUM sp. Fabaceae. **Clover.**

No. 327. Collected along the roadside a mile east of Toluca, State of Mexico, November 12, 1930, at 8,700 feet altitude. A clover about 10 feet high with red flowers.

90447. VICIA sp. Fabaceae. **Vetch.**

No. 325. From the crater west of San Rafael, Distrito Federal, November 10, 1930, at an altitude of 7,800 feet.

90448. ALBIZZIA KATANGENSIS Wildem. Mimosaceae.

From Belgian Congo, Africa. Seeds presented by the Directeur Général, Comité Spécial du Katanga, Elisabethville. Received December 5, 1930.

A large deciduous tropical tree, valuable for timber. The roots are used in an infusion as a disinfectant.

For previous introduction see 48429.

90449. KHAYA NYASICA Stapf. Meliaceae.

From Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda. Received December 5, 1930.

The red mahogany is one of the most valuable timber trees of Rhodesia, and is also widely distributed over Mozambique. It is fairly rapid in growth, though not equal to some of the eucalypts in this respect. It is found most often growing near streams, but it also occurs on high ground at a distance from water. The timber is very durable and is not attacked by white ants or borers.

For previous introduction see 85748.

90450. TELFAIRIA OCCIDENTALIS Hook. f. Cucurbitaceae.

From Gold Coast, Africa. Seeds presented by L. A. King-Church, Conservator of Forests' Office, Department of Agriculture, Akkra, through David Fairchild, Bureau of Plant Industry. Received December 5, 1930.

A woody climber up to 100 feet high, with digitately compound leaves of oblong leaflets, 3-nerved from the base, large pale-purple flowers, and fleshy 10-ribbed fruits about 2 feet long. The flat irregularly shaped seeds are 1 to 2 inches across and are boiled and eaten. It is native to Sierra Leone.

90451 to 90515.

From Chihli Province, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 5, 1930.

90451. ASTER sp. Asteraceae.

No. 7431. From Peiping, October 26, 1930. An attractive small-flowered fall-blooming aster with small finely cut leaves. The flowers are less than 1 inch in diameter.

90451 to 90515—Continued.

90452. ASTRAGALUS MELILOTOIDES Pall. Fabaceae.

No. 7178. From Tangshang, Peiping, October 23, 1930.

For previous introduction and description see 89593.

90453. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean.**

No. 7505. From a farmer in Tahsinfeng, October 22, 1930. A medium-sized black bean speckled with brown. The green beans are used as a vegetable and the dried beans are used for porridge.

90454. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

No. 7426. From the village of Nanchuangying, near Peiping, October 22, 1930.

90455. HORDEUM VULGARE PALLIDUM Seringe. Poaceae. **Six-rowed barley.**

No. 7425. From the village of Nanchuangying, near Peiping, October 22, 1930. Barley is not very extensively grown in this vicinity.

90456. LESPEDEZA sp. Fabaceae. **Bushclover.**

No. 7429. En route from Tang Shan to Nanchuangying, October 23, 1930. A lespedeza with wiry stems, which blooms early. The seeds ripen late and hold well in the pods. It is common in the vicinity of Peiping.

90457 to 90460. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

Nos. 90457 and 90458 were received from a farmer in Nanchuangying, October 22, 1930.

90457. No. 7501. A medium-sized marbled gray and black bean used for food.

90458. No. 7502. A medium-small reddish-brown bean which is used boiled and as a paste.

90459. No. 7503. From Tahsinfeng, October 22, 1930. A medium-small marbled gray and black bean, used for food.

90460. No. 7504. From Taipingchuang, October 22, 1930. A medium-small marbled black and gray bean, used for food.

90461 to 90467. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

Nos. 90461 and 90462 were received from a farmer in Tahsinfeng, October 22, 1930. They are used for making noodles, vermicelli, and bean paste.

90461. No. 7513. A mixed sample of medium-small dull green and brown beans.

90462. No. 7514. A medium-small dull-green bean.

90463. No. 7515. From Taipingchuang, October 22, 1930. A medium-small black bean, used for food.

90464. No. 7516. From Nanchuangying, Octber 22, 1930. A mixed sample of medium-small dull-green and dull-brown beans, used for noodles, vermicelli, and bean paste.

90451 to 90515—Continued.

Nos. 90465 and 90466 were received from a bean-sprout factory in Peiping, October 25, 1930.

90465. No. 7535. A medium-sized glossy green bean with white hilum; considered the best variety for sprouts; originally from Kalgan.

90466. No. 7538. A medium-sized dull-green bean with white hilum, known as hairy mung bean. It is used for sprouts, bean vermicelli, and bean noodles.

90467. No. 7559. From the Botanical Garden, West Peiping gate, Peiping. A medium-small dull-green bean; used for bean sprouts and bean vermicelli.

90468. PHASEOLUS CALCARATUS Roxb. Fabaceae. **Rice bean.**

No. 7560. From the Botanical Garden, West Peiping gate, Peiping, October 28, 1930. A mixture of medium-small yellowish-green and brown beans.

90469. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

No. 7427. From the Winter Palace, near the Jade Buddha, at Peiping, October 23, 1930. A tree 700 years old, which branches rather low.

90470 to 90474. PISUM SATIVUM L. Fabaceae. **Pea.**

From the Botanical Garden, West Peiping gate, Peiping, October 28, 1930.

90470. No. 7551. *Peiping small yellow* field pea. A very light-buff round pea.

90471. No. 7552. *Peiping green* field pea. A medium-sized wrinkled light-green pea with green germ.

90472. No. 7553. *Peiping large yellow* field pea. A medium-sized nearly round very light-buff pea.

90473. No. 7554. *Lang tou* (early German pea). A medium-sized slightly wrinkled light-green pea.

90474. No. 7555. *Ssu chwan* (white pea). A medium-sized slightly wrinkled light-buff pea.

90475 to 90506. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 90475 to 90478 were from Taipingchuang, October 22, 1930.

90475. No. 7407. A medium-small light-green oval slightly flattened bean slightly mottled with brown; hilum brown.

90476. No. 7408. *Early small green.* A medium-small slightly flattened light-green bean with pale hilum; germ yellow.

90477. No. 7409. A medium-small oblong much-flattened black bean with yellow germ. Said to be a tall-growing sort with vining terminal.

90478. No. 7410. A medium-sized oval slightly flattened green bean with pale hilum and green germ.

90479 and 90480. From Nanchuangying, October 22, 1930.

90479. No. 7413. A medium-sized, much-flattened black bean with green germ.

90451 to 90515—Continued.

90480. No. 7414. A medium-sized oval yellow bean with brown hilum.

Nos. 90481 to 90485 were collected at Tahsinfeng, October 22, 1930.

90481. No. 7415. A medium-sized oval slightly flattened light-green bean with pale hilum and yellow germ.

90482. No. 7416. A medium-small oblong much-flattened black bean with yellow germ.

90483. No. 7417. A medium-sized oval dark-green bean with light-brown hilum and green germ.

90484. No. 7418. A medium-small oblong slightly flattened green bean with brown hilum and yellow germ.

90485. No. 7419. A medium-sized oval yellow bean with brown hilum.

Nos. 90486 and 90487 were collected in a bean-sprout factory, Peiping, October 25, 1930.

90486. No. 7533. A medium-sized oval green bean with brown hilum. This variety comes from the southwestern part of the Peiping district and is used for green soybean sprouts.

90487. No. 7534. A medium-sized oval yellow bean with brown hilum. This variety comes from the southwestern part of the Peiping district and is used for making yellow soybean sprouts.

Nos. 90488 to 90490 were collected from the Liu Lo Grain Shop, Peiping, October 27, 1930.

90488. No. 7540. A medium-small oblong glossy black bean with yellow germ. Used as forage and also in the making of a dried form of natto.

90489. No. 7541. A medium-sized oval green bean with brown hilum and green germ. Used for green bean sprouts.

90490. No. 7542. A medium-sized oval yellow bean with brown hilum, very similar to Easycook variety. Used for making bean curd.

Nos. 90491 to 90498 were from the Botanical Garden, West Peiping gate, Peiping, October 28, 1930.

90491. No. 7543. *Peiping jam-colored* bean. A medium-sized oval glossy brown bean.

90492. No. 7544. A mixture of black-seeded sorts, very similar to the old Wilson variety [19183]. Seed varies from medium small to medium; from slightly flattened to flat; some have yellow germ, others green.

90493. No. 7545. A medium-small much-flattened black bean with yellow germ, very similar to the Cloud variety [16790]. Used for forage and in making a dry nattolike product.

90494. No. 7546. *Peiping cat's eye* bean. A medium-large oval black bean marked with brown concentric rings. Similar to Meyer variety [17852]. It is soaked in water and used roasted.

90451 to 90515—Continued.

90495. No. 7547. A medium-sized oval slightly flattened light glossy yellow bean with brown hilum; used for bean curd.

90496. No. 7548. A medium-large oval slightly flattened green bean with brown hilum and green germ; used for green bean sprouts.

90497. No. 7549. *Chuo chou* (large green). A large oval green bean with dark-brown hilum and green germ.

90498. No. 7550. *Ho bei* (large red). A medium-sized, nearly round, dark-brown bean.

90499. No. 7561. *Black and white.* From a street grain market, Peiping, October 29, 1930. A medium-sized oval greenish-yellow bean with black hilum; said to be grown at Kalgan.

Nos. 90500 to 90506 came from the Heian Nando Grain Inspection Office, Chinnampo, Chosen, October 29, 1930.

90500. No. 7562. *Hokkaido,* grown in Junsen, Chosen. A medium-sized oval light glossy yellow bean with light slate black hilum; used for bean curd, miso, and natto.

90501. No. 7563. *Honta,* grown in Sanwamen village, Rynkogum, Chosen. A medium-large oval light glossy yellow bean with pale hilum.

90502. No. 7564. *Wante,* grown in Angaku, Kokaido Prefecture, Chosen. A medium-sized glossy straw to yellowish green-colored bean which is slightly mottled; hilum brown.

90503. No. 7565. *Heiyo,* grown in Junsen, Chosen. A medium-sized oval glossy yellow bean with pale hilum.

90504. No. 7566. *Ryugan* (dragon eye), grown in Junsen, Chosen. A medium-sized oval glossy yellow bean with black hilum.

90505. No. 7567. *Oiarukon,* grown in Tokusen, Chosen. A large oval glossy yellow bean with pale hilum.

90506. No. 7568. *Honta,* grown in Dailaimen village, Chosen. A medium-large oval light glossy yellow bean with pale hilum.

90507 and 90508. VICIA FABA L. Fabaceae. **Broadbean.**

From the Botanical Garden, West Peiping gate, Peiping, October 28, 1930. Varieties used as sprouts and as green beans.

90507. No. 7556. A medium-large, much-flattened, light-tan bean with dark-brown hilum.

90508. No. 7557. A medium-small olive-green bean with black hilum.

90509 to 90515. VIGNA spp. Fabaceae.

90509. VIGNA SESQUIPEDALIS (L.) Fruwirth. **Asparagus-bean.**

No. 7506. From Tahsinfeng, October 22, 1930. A mixture of medium-sized black and reddish-pink varieties. The green pods and also the dried beans are used for food.

90451 to 90515—Continued.

90510 to 90515. VIGNA SINENSIS (Torner) Savi. **Cowpea.**

Nos. 90510 to 90512 were from a farmer in Tahsinfeng, October 22, 1930.

90510. No. 7507. A medium-sized white cowpea with brown hilum; used for food.

90511 and 90512. Mixed samples of medium-sized pink and pink and white cowpeas; used for food.

90511. No. 7509.

90512. No. 7510.

90513. No. 7511. From Nanchuangying, October 22, 1930. A mixed sample of medium-sized white cowpea with brown hilum and pink cowpeas; used for food.

90514. No. 7512. From Taipingchuang, October 22, 1930. A medium-sized white cowpea with brown hilum; used for food.

90515. No. 7539. Purchased from the Liu Ho Grain Shop, Peiping, October 27, 1930. A medium-sized cowpea, marbled brown and gray (whippoorwill markings). Used as a green vegetable bean and also cooked in porridge and soups.

90516. FICUS CALOPHYLLOIDES Elmer. Moraceae. **Fig.**

From the Philippine Islands. Seeds presented by P. J. Wester, Bureau of Agriculture, Manila. Received December 8, 1930.

Weeping fig. A large handsome spreading tropical tree 70 feet high and 4 feet in diameter, native to the Philippine Islands, with elliptic leaves 5 inches long and flattened globose yellowish-brown fruits.

For previous introduction see 80417.

90517 to 90523.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Max Souviron, Bureau of Plant Industry. Received December 9, 1930.

90517. CARICA PAPAYA L. Papayaceae. **Papaya.**

No. 418. From Orizaba, Vera Cruz, November 20, 1930.

90518. CROTALARIA INCANA L. Fabaceae.

No. 447. Near Guanajuato, Guanajuato, November 27, 1930. A herbaceous plant 20 to 30 inches high with yellow and velvet purple flowers, found at an altitude of 7,000 feet in a deserted mine below the town.

90519. TIGRIDIA sp. Iridaceae. **Tigerflower.**

No. 471. Collected in a garden below the dam near Valenciana mine, Guanajuato, November 27, 1930, at an altitude of 8,000 feet.

90520. (Undetermined.)

No. 460. From San Juan del Rio, Queretaro, November 25, 1930. A herbaceous plant growing at an altitude of 7,000 feet on a rocky hillside.

90517 to 90523—Continued.

90521. (Undetermined.)

No. 470. Near the Valenciana mine, Guanajuato, November 27, 1930. A herbaceous plant 3 to 18 feet high, with red flowers, found at an altitude of 8,000 feet.

90522. (Undetermined.)

No. 367. Along the road between Tenango and Tenancingo, Mexico State, November 13, 1930. A leguminous plant with large pods, 6 inches long and over an inch wide, found at an altitude of 8,000 feet.

90523. ZORNIA DIPHYLLA (L.) Pers. Fabaceae.

No. 401. From Nogales, Vera Cruz, November 19, 1930. A prostrate leguminous yellow-flowered plant collected in a gorge southeast of town on the mountain side at 5,000 feet altitude.

90524. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

From Sochi, Union of Soviet Socialist Republics. Trees presented by Professor Lichagov, Sochi Experiment Station. Received December 9, 1930.

Bellflower × Kitaika.

90525. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

From the port of San Juan, Puerto Rico. Seeds presented through D. N. Shoemaker, Bureau of Plant Industry. Received December 11, 1930.

90526 and 90527. LILIUM spp. Liliaceae. **Lily.**

From England. Seeds purchased from W. A. Constable, Paddock Wood, Kent. Received December 12, 1930.

90526. LILIUM FARRERI Turrill.

A handsome species discovered in Yunnan, China, by Reginald Farrer and frequently referred to in his writings as the marble Martagon lily. It is a slender and graceful lily, 2 to 3 feet high, bearing, on long pedicels, up to five recurved white flowers which are slightly spotted with purple on the interior. This lily possesses a strong constitution and increases fast by means of numerous small bulbs forming at the base of the stem.

For previous introduction see 75727.

90527. LILIUM PHILIPPINENSE FORMOSANUM (Baker) Wilson.

A form of the Benguet lily which is native to Taiwan and is characterized by its long narrow leaves and vinous purple-tinged flowers.

90528 to 90532. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From the Union of Soviet Socialist Republics. Seeds presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures, Leningrad. Received December 12, 1930.

90528. No. 2800. From Ukhta Mountain, Murmansk Government.

90529 to 90532. Wild forms.

90529. No. 3966. From Ssevero Dvinsk Government.

90528 to 90532—Continued.

90530. No. 3943. From Ssevero Dvinsk Government.

90531. No. 4374. From Novo-Nikolsk Government.

90532. No. 4376. From Buriat-Mongol Republic (former Irkutsk Government).

90533. MYOPORUM LAETUM Forst. f. Myoporaceae.

From Mexico. Seeds collected by Dr. Donald Reddick, Cornell University, in collaboration with Max Souviron, Bureau of Plant Industry. Received December 1, 1930.

No. 329. From Toluca, Mexico State, November 12, 1930. Collected from Señor Zapeda's garden, at an altitude of 8,700 feet, a shrub or small tree up to 25 feet high, with lanceolate to obovate leaves 2 to 4 inches long and axillary fascicles of small white flowers spotted with purple, followed by fleshy purple fruits less than half an inch long. It is native to New Zealand.

90534 to 90536.

From Java, Netherland East Indies. Seeds presented by G. Koch, Manager, Sindang Panen Estate, Peerwakarta, through David Fairchild, Bureau of Plant Industry. Received December 16, 1930.

90534. ACACIA VILLOSA (Swartz) Willd. Mimosaceae.

A native of Venezuela which is used in Java for the same purpose as *Leucaena glauca;* that is, as a shade for field crops; it is preferred because of its slower growth. It is said to be used in the teak forest plantings as a permanent leguminous undershrub to add nitrogen and humus to the soil.

For previous introduction see 67837.

90535. CASSIA HIRSUTA L. Caesalpiniaceae.

An erect annual herb with long hairs. The compound leaves are made up of three to five pairs of ovate leaflets 2 to 3 inches long, and the yellow flowers are borne in axillary racemes. It is native to Brazil.

For previous introduction see 81411.

90536. CLITORIA LAURIFOLIA Poir. (*C. cajanifolia* Benth.). Fabaceae.

An erect herbaceous tropical leguminous plant said to have white flowers. It may prove valuable as a cover crop.

For previous introduction see 72995.

90537 to 90543. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Halle-Saale, Germany. Tubers presented by E. F. Gaines, Pullman, Wash. Received December 16, 1930.

90537. *Paulsen* × *Holscher;* Gaines No. 1; *Firli.* A very early potato with flesh and skin yellow, shallow eyes, kidney-shaped tubers; small finely pubescent leaves which roll when near maturity; flowers, blue violet. This potato is of good quality, can be planted early in all soils, and is immune to canker.

90538. *Paulsen* × *Holscher;* Gaines No. 2; *Goldappel.* An early potato with golden-yellow flesh, yellow skin, round shallow eyes, and white flowers. It is immune to canker.

90537 to 90543—Continued.

90539. *Paulsen* × *Holscher;* Gaines No. 3; *Fsolde.* An early kidney-shaped potato with yellow flesh and skin, shallow eyes, and faint blue-violet flowers. It is a good salad potato and does best on sandy soil. Immune to canker.

90540. *Paulsen* × *Holscher;* Gaines No. 4; *Beate 1.* A round-flat vigorous good-flavored early potato with white flesh and skin, branching pure-green foliage, and white flowers. It is adapted to a wide range of soil, is immune to canker, and is of the highest commercial quality.

90541. *Paulsen* × *Holscher;* Gaines No. 5; *Roland 1.* A mid-late, very vigorous, round and flattened potato with white flesh, red skin, shallow dark-red eyes, nearly pure green leaves, and red-violet flowers. This potato is rich in food value, does well on all soils, is resistant to canker, and is of first-class market quality.

90542. *Paulsen* × *Holscher;* Gaines No. 6; *Goldadler.* A mid-late potato with long-oval round tubers, golden-yellow flesh and skin, shallow eyes, strong green vines, and light-blue violet flowers with white star in center. It is a new variety, immune from canker, of medium quality, but stands handling well.

90543. *Paulsen* × *Holscher;* Gaines No. 7; *Hellena.* A canker resistant, late potato with white flesh and skin, mid-deep eyes; long-round, very thrifty, tall stems which are nearly pure green, and white flowers. This is a first-quality potato with a good flavor and a high percentage of starch.

90544. Ficus sp. Moraceae.

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received December 16, 1930.

A handsome tree with large palmate leaves resembling those of the horsechestnut, some of the leaflets being over a foot in diameter. The tree grows to a height of 50 feet, and both the pulp and the kernels of the fruits are eaten by small animals and birds.

90545 to 90585.

From Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 17, 1930.

Nos. 90545 to 90559 were collected by M. Ohara, of the Manshu Nosan Shokai, Dairen, in November, 1930.

90545. Astragalus davuricus (Pall.) DC. Fabaceae. **Milkvetch.**

No. 6468. From near Kungling, November 12, 1930.

90546. Cassia mimosoides L. Caesalpiniaceae.

No. 6453. From near Pulatien, November 11, 1930.

90547. Indigofera kirilowii Maxim. Fabaceae. **Kirilow indigo.**

No. 6466. From near Antung, November 12, 1930.

90548. Lathyrus davidii Hance. Fabaceae.

No. 6467. From near Dairen, November 12, 1930. A white-flowered climber,

90545 to 90585—Continued.

3 to 4 feet high, with membranous trifoliolate leaves and yellowish-white flowers. Native to northern China.

90549 to 90556. Lespedeza spp. Fabaceae. **Bushclover.**

90549. Lespedeza cyrtobotrya Miquel.

No. 6451. From near Dairen, November 11, 1930.

90550 and 90551. Lespedeza daurica (Laxm.) Schindler (*L. medicaginoides* Bunge).

Collected near Dairen, November 11, 1930.

For previous introduction see 65493.

90550. No. 6463. **90551.** No. 6448.

90552 and 90553. Lespedeza stipulacea Maxim.

For previous introduction see 82075.

90552. No. 6457. From near Kungchuling, November 11, 1930.

90553. No. 6464. From near Dairen, November 12, 1930.

Nos. 90554 and 90555 were collected near Chinchon, November 11, 1930.

90554. Lespedeza tomentosa (Thunb.) Maxim.

No. 6454.

For previous introduction see 89745.

90555. Lespedeza virgata (Thunb.) DC.

No. 6461.

For previous introduction see 62182.

90556. Lespedeza sp.

No. 6450. From near Dairen, November 11, 1930.

90557. Melilotus indica (L.) All. Fabaceae. **Sweetclover.**

No. 6456. From near Kungchuling, November 11, 1930.

90558. Melilotus suaveolens Ledeb. Fabaceae.

No. 6449. From near Ingchantzu, November 12, 1930.

90559. Phaseolus aureus Roxb. Fabaceae. **Mung bean.**

No. 6458. From near Ryojun, November 12, 1930.

90560 to 90580. Soja max (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 90560 to 90579 are a collection of yellow-seeded varieties used for oil and oil meal, collected at the Dairen wharves November 14, 1930.

90560. No. 6470. Said to have come from between the Kungchuling district and Changchun.

Nos. 90561 to 90563 are from the Changchun and Harbin districts.

90561. No. 6471. **90563.** No. 6473.

90562. No. 6472.

Nos. 90564 to 90566; locality not known.

90564. No. 6474. **90566.** No. 6476.

90565. No. 6475.

90545 to 90585—Continued.

90567. No. 6477. From Changchun district.

Nos. 90568 to 90570; locality not known.

90568. No. 6478.

90569. No. 6479.

90570. No. 6480.

90571. No. 6481. From the Changchun district.

90572. No. 6482. Locality not known.

90573. No. 6483. From Changchun to the Harbin district.

90574. No. 6484. From near Changchun.

90575. No. 6485. Locality not known.

90576. No. 6486. From near Changchun.

Nos. 90577 to 90579; locality not known.

90577. No. 6487.

90578. No. 6488.

90579. No. 6489.

90580. No. 6446. Collected near Kungchuling by M. Ohara, of the Manshu Nosan Shokai, Dairen, November 12, 1930. A very viny plant with small dull-black seed which grows abundantly in waste places.

90581. TRIFOLIUM LUPINASTER L. Fabaceae. **Clover.**

No. 6447. Collected near Kungchuling by M. Ohara, November 12, 1930. This may be of value for forage and green manure.

90582 to 90585. VICIA spp. Fabaceae. **Vetch.**

Collected by M. Ohara, November 12, 1930.

90582 and 90583. VICIA AMOENA Fisch.

Collected near Kungchuling.

90582. No. 6460.

90583. No. 6462. Variety *oblongifolia*.

90584. VICIA CRACCA L. **Cow vetch.**

No. 6452. Collected near Dairen.

90585. VICIA UNIJUGA A. Br.

No. 6465. Collected near Dairen.

90586 and 90587.

From Buitenzorg, Java. Seeds presented by Dr. W. Docters van Leeuwen, Director, Botanic Garden. Received December 18, 1930.

90586. LIVISTONA JENKINSIANA Griffith. Phoenicaceae. **Palm.**

An East Indian palm 20 to 30 feet tall with a thick round crown. The leaves are used for covering tops of boats and umbrellas.

For previous introduction see 46697.

90587. LIVISTONA ROTUNDIFOLIA (Lam.) Mart. Phoenicaceae. **Java fan palm.**

An erect pinnate-leaved palm, native to tropical Asia, about the same size as the coconut palm. The hard, durable wood is used for general construction.

For previous introduction see 72599.

90588 to 90648.

From Tiflis, Union of Soviet Socialist Republics. Seeds presented by the Director of the Botanic Garden. Received December 18, 1930.

90588 to 90592. ACER spp. Aceraceae. **Maple.**

90588. ACER CAPPADOCICUM Gleditsch (*A. laetum* C. Mey.). **Coliseum maple.**

A tree up to 50 feet high, native to the Caucasus region and eastward to western China. The 5-lobed to 7-lobed cordate leaves are 3 to 6 inches across, and the greenish-yellow flowers, in upright corymbs, are followed by spreading winged fruits.

90589. ACER DIVERGENS Koch and Pax.

A tree, native to the Caucasus region, with ash-brown bark and leathery 5-lobed leaves which are dark green above and pale beneath.

For previous introduction see 64290.

90590. ACER HYRCANUM Fisch. and Mey.

A southern European maple of compact habit, about 25 feet high, with bright-green 5-lobed leaves and greenish-yellow flowers which are followed by winged fruits about 1 inch long.

For previous introduction see 64291.

90591. ACER INSIGNE Boiss. and Buhse.

A large tree with deeply cordate leaves 5 to 10 inches across, having five coarsely crenate-serrate lobes. The flowers are borne in large erect panicles. It is native to the Caucasus region and northern Persia.

90592. ACER MONSPESSULANUM IBERICUM (Bieb.) Pax.

A form of the Montpelier maple with larger leaves, having the inner lobes slightly 3-lobed and obtuse. It is native to the Caucasus region.

90593 to 90607. ALLIUM spp. Liliaceae. **Onion.**

90593. ALLIUM AFFINE Ledeb.

An onion about 18 inches high, with semicylindrical leaves and a dense umbel of white flowers on an erect slender scape. Native to Persia and the Caucasus.

90594. ALLIUM ALBIDUM Fisch.

A species with clustered oblong bulbs, very narrow semiterete leaves, and white or yellowish-white flowers. Native to the southern part of the Union of Soviet Socialist Republics.

For previous introduction see 59346.

90595. ALLIUM ATROVIOLACEUM Boiss.

This onion, a native of Asia Minor, has very narrow flat leaves about 2 feet long, and dark-purple flowers in a many-flowered globular umbel.

90596. ALLIUM CHARAULICUM Fomin.

A Caucasian onion with filiform leaves and white flowers, marked with reddish lines, in a rather dense umbel, on a scape 6 to 8 inches high.

90597. ALLIUM DAGHESTANICUM Hort.

A name for which a place of publication and a description have not been found.

90588 to 90648—Continued.

90598. ALLIUM FLAVUM L.

A wild onion with an upright or ascending stem a foot or less high, narrowly linear leaves about as long as the stem, and small yellow bell-shaped flowers in a rather dense cluster. Native to dry rocky places, especially in chalky soil, in south-central Europe.

For previous introduction see 82011.

90599. ALLIUM FOMINIANUM Mishchenko.

A name for which a description has not been found.

90600. ALLIUM GRACILE Albow.

The erect slender scape of this alpine onion bears a hemispherical lax head of rose-colored flowers. The long leaves are linear-filiform. It is native to the southern part of the Union of Soviet Socialist Republics.

90601. ALLIUM LEPIDUM Kunth.

A rather small onion with semiterete leaves 3 to 4 inches high, and a shorter scape bearing an umbel of purplish flowers. It is native to the Caucasus.

90602. ALLIUM PSEUDOSTRICTUM Albow.

An alpine onion about 8 inches high, with flat linear leaves and pale-rose flowers in a small dense globular head on a scape 10 inches high. Native to the southern part of the Union of Soviet Socialist Republics.

90603. ALLIUM ROTUNDUM L.

Variety *scorodoprasoides*. A pink-flowered onion with flat leaves about 1 foot long. The dense globular umbel is borne on a scape, leafy for one-third to one-half its length. It is common in subalpine regions of Asia Minor.

90604. ALLIUM RUBELLUM Bieb.

A pink-flowered onion with the globular umbel on a slender scape, leafy below. The leaves are semicylindrical and very narrow. It is native to Asia Minor.

90605. ALLIUM RUPESTRE Bieb.

An onion from Asia Minor with subterete-linear leaves and about 10 flesh-colored flowers in a small umbel.

90606. ALLIUM SCHOENOPRASUM L. **Chives.**

The sand leek or racambole of Europe and Asia Minor; resembles garlic, but has smaller bulbs of milder flavor which are produced at the tip of the stem as well as at its base.

For previous introduction see 78991.

90607. ALLIUM VICTORIALIS L.

One of the most distinctive species of European onion, with stems about 2 feet high, leaves resembling those of lily-of-the-valley, and white or greenish-white flowers.

For previous introduction see 86666.

90608 to 90615. ALYSSUM spp. Brassicaceae.

90608. ALYSSUM CALYCINUM L.

A rather low annual alyssum from the mountains of Asia Minor. The lower leaves are obovate, the upper lanceolate, and the flowers are in a simple raceme.

90588 to 90648—Continued.

90609. ALYSSUM CAMPESTRE L.

A many-stemmed gray or yellow European annual which is rather variable in leaf and flower characters. The leaves are commonly oblong-lanceolate, and the flowers are yellowish.

90610. ALYSSUM DESERTORUM Stapf.

A dwarf hairy annual with pale-yellow flowers. Native to sandy places in southeastern Europe.

90611. ALYSSUM HIRSUTUM Bieb.

An annual about a foot high, hairy throughout, with ascending stems, oblong-lanceolate leaves, and yellowish flowers. Resembling *A. campestre*, it is larger in all its parts. Native to southeastern Europe and Asia Minor.

90612. ALYSSUM MURALE Bieb.

A perennial alyssum with numerous stems, hairy obovate-lanceolate leaves, and pale-yellow flowers. Native to the mountains of Greece.

90613. ALYSSUM REPENS Baumg.

A perennial alyssum from the mountains of southeastern Europe. It is about 1 foot high and differs from *A. montanum* in having larger flowers.

90614. ALYSSUM STRICTUM Willd.

An annual alyssum with numerous ascending branches, 18 inches high, oblong-linear leaves, and cylindrical racemes of yellow flowers. Native to Asia Minor.

90615. ALYSSUM SZOVITSIANUM Fisch. and Mey.

An annual yellow-flowered alyssum from southeastern Europe, about 1 foot high, with oblong-linear leaves and pods sometimes 1 inch long.

90616 and 90617. CROCUS spp. Iridaceae.

90616. CROCUS SCHAROJANI Rupr.

A crocus with a very small globose bulb, with leaves appearing in the spring and remaining until the bright-yellow flowers appear in the latter part of July and August in the Caucasus region, where it is native. The throat of the corolla is yellowish white, the anthers are pale yellow, and the style branches are orange red.

90617. CROCUS VALLICOLA Herb.

In the Caucasus, where this crocus is native, its cream-colored rather large flowers open in August and September. The leaves, marked with white lines, appear after the flowers.

90618 and 90619. GALANTHUS spp. Amaryllidaceae. **Snowdrop.**

90618. GALANTHUS CAUCASICUS Baker.

A spring-blooming bulbous plant, native to the Caucasus, with sword-shaped leaves about 9 inches long, and large white flowers.

For previous introduction see 67908.

90619. GALANTHUS LATIFOLIUS Rupr.

A snowdrop with channeled leaves nearly 1 inch wide and white flowers having the inner segments green both inside and out at the sinus. It is native to the Caucasus region, where it is said to flower in May.

90588 to 90648—Continued.

90620 to 90630. GERANIUM spp. Geraniaceae. Cranesbill.

90620. GERANIUM ALBANUM Bieb.

A perennial cranesbill from the Caucasus, with diffuse stems 18 inches high, 7-parted to 9-parted reniform leaves, and purplish-red flowers.

90621. GERANIUM COLUMBINUM L.

A much-branched annual, with round palmately 5-parted to 7-parted leaves and rather large purple flowers. Native throughout Europe.

90622. GERANIUM DISSECTUM L.

An erect hispid annual, with finely dissected orbicular palmately 5-parted to 7-parted leaves with linear segments and lilac flowers. Native to Asia Minor and southeastern Europe.

90623. GERANIUM DIVARICATUM Ehrh.

A divaricately branched annual, with roundish 5-parted leaves and deep rose flowers. Native to the mountainous sections of central Europe.

90624. GERANIUM GRACILE Ledeb.

A herbaceous perennial, about 18 inches high, with hairy 3-lobed to 5-lobed leaves and purple flowers on an elongated peduncle. Native to southeastern Europe.

90625. GERANIUM MOLLE L.

A hairy annual cranesbill with ascending or diffuse, rounded-palmate 7-lobed to 9-lobed leaves and purplish flowers. Native from southeastern Europe to Syria.

90626. GERANIUM PALLENS Bieb.

A herbaceous perennial with hispid stems and branches and leaves, orbicular on the lower part of the stem and three lobed to five lobed above. The flowers are pale violet. Native to Asia Minor.

90627. GERANIUM PUSILLUM Burm. f.

An annual pubescent cranesbill from southeastern Europe and Asia Minor, with diffuse stems, roundish 5-parted to 9-parted leaves, and small coerulean-violet flowers.

90628. GERANIUM PYRENAICUM Burm. f.

A herbaceous perennial about 1 foot high, softly hairy throughout, with an ascending stem, reniform 7-parted to 9-parted leaves, and axillary purple flowers. Native to central and southern Europe.

90629. GERANIUM PYRENAICUM Burm. f.

Variety *depilatum*. A glabrous form.

90630. GERANIUM ROTUNDIFOLIUM L.

A red-flowered annual, native to stony places in southeastern Europe and Asia Minor, with a short erect branched stem and reniform 7-parted leaves.

90631 to 90636. MUSCARI spp. Liliaceae. Grape-hyacinth.

90588 to 90648—Continued.

90631. MUSCARI CAUCASICUM (Griseb.) Baker.

An ornamental purple-flowered bulbous plant, with a scape 8 inches high. Native to dry mountainous regions of the Caucasus.

For previous introduction see 67922.

90632. MUSCARI COMMUTATUM Guss.

A spring-flowering bulb, with linear leaves 4 to 6 inches long, and odorless dark-blue cylindrical flowers twice as long as broad and with segments which are not recurved. It is native to Sicily.

90633. MUSCARI NEGLECTUM Guss.

A low bulbous plant, native to the Mediterranean countries, with numerous strap-shaped leaves up to a foot in length and fragrant dark-blue flowers.

For previous introduction see 67924.

90634. MUSCARI PENDULUM Trautv.

A narrow-leaved bulbous plant from Asia Minor, with dense oblong racemes of sky-blue flowers.

For previous introduction see 67012.

90633. MUSCARI NEGLECTUM Guss.

A perennial with a large bulb which sends up several linear leaves 5 to 6 inches long, and several scapes, 4 to 5 inches high, with racemes of faintly odorous, bright-blue, urn-shaped flowers a sixth of an inch across. Native to the Caucasus region.

For previous introduction see 81350.

90636. MUSCARI TENUIFLORUM Tausch.

A grape-hyacinth from south-central Europe, similar to *Muscari comosum*, but generally smaller, with upright narrower-linear leaves as long as the stem, which is about 1 foot high. The lower fertile flowers, in a cylindrical raceme, are apple green with deep-brown slightly recurved segments, while the numerous sterile flowers form a rather dense long raceme above.

For previous introduction see 81351.

90637. ORNITHOGALUM ARCUATUM Stev.

The leaves of this Caucasian species are broadly lanceolate, and the stout erect scape bears a raceme of white flowers nearly a foot long.

90638 to 90642. PAEONIA spp. Ranunculaceae. Peony.

90638. PAEONIA ABCHASICA Hort.

A name for which a place of publication and a description have not been found.

For previous introduction see 79923.

90639. PAEONIA MLOKOSEWITSCHI Lomakin.

A herbaceous perennial peony with dark bluish-green biternate leaves with red nerves and margins and yellow flowers 4 to 5 inches in diameter which have numerous stamens and purple stigmas. This peony, considered the handsomest of the yellow-flowered forms, is native to the central Caucasus.

For previous introduction see 81352.

90588 to 90648—Continued.

90640. PAEONIA TENUIFOLIA L.
Fringed peony.

A hardy herbaceous perennial 1 foot or more high, densely leafy, with ternate, much-divided leaves, and an erect dark-crimson flower about 3 inches across. It is native to the Caucasus region.

For previous introduction see 79925.

90641. PAEONIA TRITERNATA Pall.

A tall herbaceous peony, native to Siberia, usually about 3 feet high, with triternate leaves and purple flowers.

For previous introduction see 81353.

90642. PAEONIA sp.

Variety *Chamaeleon.*

90643 to 90645. ROSA spp. Rosaceae.
Rose.

90643. ROSA MEDWEDEWII Hort.

A name for which a place of publication and a description have not been found.

90644 and 90645. ROSA SPINOSISSIMA L.
Scotch rose.

90644. Variety *subbiserrata.*

90645. Variety *leptacantha.*

90646. SCILLA ROSENI Koch. Liliaceae.
Squill.

A bulbous plant, native to the Caucasus, with linear-oblong leaves and small white flowers.

For previous introduction see 79928.

90647 and 90648. SEMPERVIVUM spp. Crassulaceae.
Houseleek.

90647. SEMPERVIVUM GLOBIFERUM L.

A stemless succulent with the main rosette 2 to 3 inches across, rather flat, but the offsets, borne on scaly peduncles 3 inches long, are globular. The obovate to elliptical leaves are slightly hairy, and the flower scape, 1 foot high, is densely hairy. The 12-parted flowers have linear-lanceolate, pale-yellow petals which are green-striate outside. It is native to southeastern Europe.

90648. SEMPERVIVUM PUMILUM Bieb.

A succulent with the barren rosettes not more than 1 inch across and the numerous new rosettes on short peduncles. The rosette leaves are oblanceolate and green except the outer, which are tinted red-brown; the stem leaves are hairy and are red-brown. The flower stem, 3 to 4 inches high, bears a dense head of mauve-purple flowers 1 inch across. It is native to the Caucasus region.

90649 to 90676.

From Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 18, 1930.

Received from the forestry department, Yugakujo Agricultural Experiment Station (South Manchurian Railway), Hsiungyaocheng, Yugakujo, Manchuria, November 17, 1930.

90649 to 90676—Continued.

90649 and 90650. ABIES spp. Pinaceae.
Fir.

90649. ABIES HOLOPHYLLA Maxim.
Needle fir.

Nos. 6516 and 6517. No. 6517 was collected in the Ryining Province. A tall handsome fir, eventually 100 feet or more high, with stout spreading or ascending branches and dark-green foliage.

For previous introduction see 82470.

90650. ABIES NEPHROLEPIS (Trautv.) Maxim.

No. 6518. A Siberian conifer up to 100 feet high, resembling the Siberian fir, *Abies sibirica,* but with a rough bark, pubescent branchlets, shorter leaves, and smaller cones.

For previous introduction see 78398.

90651 to 90655. ACER spp. Aceraceae.
Maple.

90651. ACER BARBINERVE Maxim.

No. 6506. A shrubby maple, native to Manchuria, with coarsely toothed, 5-lobed leaves.

For previous introduction see 72400.

90652. ACER CAUDATUM UKURUNDUENSE (Trautv. and Mey.) Rehder.

No. 6510. A small Manchurian maple with coarsely toothed, 5-lobed or 7-lobed leaves.

For previous introduction see 71133.

90653. ACER MANDSHURICUM Maxim.
Manchurian maple.

No. 6508. A hardy Manchurian maple which forms a shrub or small tree.

For previous introduction see 72401.

90654. ACER TEGMENTOSUM Maxim.

No. 6507. An interesting green-barked maple with seeds in long racemes.

For previous introduction see 71132.

90655. ACER TRIFLORUM Komarov.

No. 6509. A tree up to 25 feet high, with glabrous branchlets. The leaves are made up of three oblong-lanceolate leaflets with entire or coarsely toothed margins, and the flowers, in groups of three, are followed by densely pubescent fruits having wide-spreading, nearly straight wings about 2 inches long. It is native to Chosen and Manchuria.

For previous introduction see 82472.

90656. ARALIA ELATA (Miquel) Seem. Araliaceae.

No. 6503.

For previous introduction see 85731.

90657. BETULA COSTATA Trautv. Betulaceae.
Birch.

No. 6493.

For previous introduction see 65487.

90658. CELASTRUS ARTICULATUS Thunb. Celastraceae.
Oriental bittersweet.

No. 6523.

For previous introduction see 82507.

90649 to 90676—Continued.

90659. CELTIS KORAIENSIS Nakai. Ulmaceae. **Hackberry.**

No. 6519. A tree native to Chosen, up to 50 feet high, with orbicular to obovate, coarsely serrate leaves 3 to 5 inches long, and dull-orange, globose fruits a quarter of an inch in diameter.

For previous introduction see 50408.

90660. EUONYMUS HAMILTONIANUS Wall. Celastraceae.

No. 6494. A large Himalayan shrub which under favorable circumstances becomes a moderate-sized tree, 30 to 35 feet high, with short straight trunk 4 to 5 feet in circumference. The clusters of 15 to 30 greenish white flowers are followed by yellow capsules the seeds of which are entirely surrounded by a scarlet aril. The fruit begins to ripen in August and the leaves are brilliantly colored in autumn.

For previous introduction see 61981.

90661. EUONYMUS MAACKII Rupr.

No. 6498. A large shrub or small tree with narrowly oval leaves about 3 inches long and small clusters of pink 4-lobed fruits which have orange-red arils. Native to northeastern Asia.

For previous introduction see 77839.

90662. FRAXINUS MANDSHURICA Rupr. Oleaceae. **Manchurian ash.**

No. 6520. A handsome tree often 100 feet high, native to Japan and the adjacent parts of the Asiatic mainland. The leaves are up to 15 inches long, with dull-green bristly leaflets. The tree is said to be susceptible to late spring frosts.

For previous introduction see 82479.

90663. LARIX DAHURICA Turcz. Pinaceae. **Dahurian larch.**

No. 6521. A tree which grows up to 100 feet in height, with long horizontal branches, reddish or yellowish branchlets, bright-green flattened leaves, and ovoid cones 1 inch long.

For previous introduction see 78403.

90664. LESPEDEZA BICOLOR Turcz. Fabaceae. **Shrub bushclover.**

No. 6490. A bushy herbaceous perennial, native to Japan, which bears a profusion of rosy-purple flowers during the early autumn, practically covering the drooping branches which sometimes become 6 feet in length.

For previous introduction see 82480.

90665. MAACKIA AMURENSIS Rupr. Fabaceae. **Amur maackia.**

No. 6491. A small tree, native to easteran Asia, with orange-brown bark, dull-green compound leaves, and short erect clusters of small yellowish-white flowers.

For previous introduction see 77835.

90666. PICEA JEZOENSIS (Sieb. and Zucc.) Carr. Pinaceae. **Yeddo spruce.**

No. 6504. A Japanese tree, up to 150 feet high, with dark-gray bark and slender horizontally spreading branches. The leaves are silvery white above and dark green beneath, and the staminate flowers are orange crimson.

For previous introduction see 75440.

90649 to 90676—Continued.

90667. ROSA ACICULARIS GMELINI (Bunge) C. Schneid. Rosaceae. **Rose.**

No. 6496. A form native to northern Europe and Asia, differing from the type in having five to seven leaflets on the flowering branches, smooth but glandular peduncles, and long pear-shaped shining fruits.

For previous introduction see 54168.

90668. ROSA DAVURICA Pall. Rosaceae. **Dahurian rose.**

No. 6497. A Manchurian shrub closely related to the cinnamon rose, with straight slender prickles, smaller double serrate leaflets, purple flowers, and ovate scarlet fruits.

For previous introduction see 65944.

90669. SCHIZANDRA CHINENSIS (Turcz.) Baill. Magnoliaceae.

No. 6492. A woody vine, native to northeastern China, with shining dark-green oval leaves and clusters of coral-colored berries.

For previous introduction see 81652.

90670 to 90673. SYRINGA spp. Oleaceae. **Lilac.**

90670. SYRINGA AMURENSIS Rupr. **Manchurian lilac.**

No. 6514. A hardy lilac, native to Manchuria, up to 12 feet high with yellowish-white flowers.

For previous introduction see 72420.

90671. SYRINGA OBLATA Lindl. **Broadleaf lilac.**

No. 6513. A tree lilac, found in masses on rocky mountain slopes between 3,000 and 5,000 feet altitude. Of value as a stock for standard lilacs and for hybridization purposes.

For previous introduction see 38828.

90672. SYRINGA OBLATA DILATATA (Nakai) Rehder.

No. 6511. A loosely branched shrub up to 12 feet high, with ovate, long-pointed leaves 6 inches long and loose clusters of pale purple-lilac flowers. Native to China.

For previous introduction see 85739.

90673. SYRINGA PALIBINIANA Nakai.

No. 6512. A shrub native to Chosen, about 10 feet high, with slender upright branches, elliptic leaves 1 to 3 inches long, and loose panicles of pale-lilac or whitish flowers.

For previous introduction see 76600.

90674. TILIA AMURENSIS Rupr. Tiliaceae. **Linden.**

No. 6522. A hardy Manchurian linden which has a habit similar to that of the small-leaved linden, *Tilia cordata*, with ovate papery long-pointed leaves which are dark green above and blue green below. It is distinguished from the small-leaved linden by its coarser dentations.

For previous introduction see 72422.

90649 to 90676—Continued.

90675. VIBURNUM SARGENTI Koehne. Caprifoliaceae. **Sargent cranberrybush.**

No. 6499. An upright compact hardy shrub, up to 15 feet high, generally similar to the American cranberrybush (*Viburnum americanum*), but with thicker leaves, hairy beneath, and larger sterile flowers, sometimes over an inch across. The red globose berries are in upright cymes.

For previous introduction see 69894.

90676. ZANTHOXYLUM SCHINIFOLIUM Sieb. and Zucc. Rutaceae.

No. 6502. A graceful Japanese shrub or small tree with attractive compound leaves and rather conspicuous clusters of greenish or brownish fruits in the autumn.

For previous introduction see 81568.

90677 to 90719.

From New South Wales, Australia. Seeds presented by G. P. Darnell-Smith, Director, Botanic Gardens, Sydney. Received December 18, 1930.

A collection of native Australian trees and shrubs.

90677. ACACIA CRASSIUSCULA Wendl. (*A. adunca* A. Cunn.). Mimosaceae.

A shrub several feet high with acutely angled branchlets, thick linear falcate 1-nerved phyllodes 2 inches long, and short racemes made up of small dense globular heads of 20 or more flowers. It is also native to Tasmania.

90678. ACACIA SALICINA Lindl. (*A. ligulata* A. Cunn.). Mimosaceae.

A tall shrub or small tree with pendulous branches and willowlike phyllodes up to 5 inches long. The yellow flowers are in short racemes of two or three globular heads.

For previous introduction see 80064.

90679 to 90683. CASUARINA spp. Casuarinaceae.

90679. CASUARINA CUNNINGHAMIANA Miquel. **Cunningham beefwood.**

A slender-branched leafless ornamental tree, the so-called beefwood, which has branchlets suggesting horsetails.

For previous introduction see 73838.

90680. CASUARINA DISTYLA Vent. (*C. paludosa* Sieber).

Unlike many of the better-known casuarinas, this species is usually a small shrub 2 to 3 feet high.

For previous introduction see 67808.

90381. CASUARINA GLAUCA Sieber. **Beefwood.**

A tree 60 to 70 feet high, usually straight and of rapid growth. The timber is red, beautifully marked, hard and tough, and is used for cabinetwork, staves, and fuel. In periods of drought, the foliage is used for feeding the stock. When the trees are cut down, the young growth shoots up quickly from the stump. This variety grows in the marshy coastal districts and frequently in land submerged with tidal water. It makes a very handsome shade tree.

For previous introduction see 75551.

90677 to 90719—Continued.

90682. CASUARINA STRICTA Ait.

This tree, commonly cultivated in California but more rare in Florida, is a fairly hardy species making a low, often shrubby growth. It is conspicuous on account of its very thick, often pendulous branchlets and very big cones. In appearance it is not so elegant as some of the other casuarinas, but it is very striking and is also of some economic value. The branchlets are said to be a favorite forage for Australian cattle, and the wood is especially valuable for shingles and posts.

For previous introduction see 67809.

90683. CASUARINA SUBEROSA Otto and Dietr.

A species with very large fruits over 1 inch long, and long coarse pendent branchlets; very distinct from *Casuarina equisetifolia*. This is one of the hardier species, for it will stand a temperature of 26° F.

For previous introduction see 62663.

90684 to 90707. EUCALYPTUS spp. Myrtaceae.

90684. EUCALYPTUS AGGLOMERATA Maiden.

A tree 50 to 80 feet high and 4 to 6 feet in diameter, with thick steel-gray lanceolate leaves 4 to 6 inches long and heads of 10 to 14 flowers followed by reddish-brown fruits a quarter of an inch in diameter.

90685. EUCALYPTUS AGGREGATA Deane and Maiden.

A small tree with flaky bark and smooth branchlets, semipendulous lanceolate undulate leaves 4 to 5 inches long, and four to six flowered umbels clustered in dense heads. The hemispherical fruits are a quarter of an inch in diameter.

90686. EUCALYPTUS HEMIPHLOIA ALBENS (Miquel) F. Muell.

A tree up to 80 feet high, with dull-green persistent bark, broadly ovate-lanceolate mealy white leaves 6 inches long, clusters of four to eight rather large flowers, and obovoid-oblong fruits nearly half an inch long.

90687. EUCALYPTUS BAUERIANA Schauer.

A small tree up to 50 feet high, with ash-gray persistent rough-furrowed bark, broadly ovate to lanceolate long-petioled leaves 3 inches long, and umbels of three to six small flowers followed by top-shaped fruits less than a quarter of an inch in diameter.

90688. EUCALYPTUS BAXTERI (Benth.) Maiden and Blakely.

A large tree with very thick ovate leaves less than 3 inches long, sessile flowers in dense heads, and globular fruits half an inch in diameter.

90689. EUCALYPTUS BEYERI R. T. Baker.

A tall tree with thin narrowly linear leaves, flowers in clusters of three to six, and pear-shaped fruits a quarter of an inch long.

90677 to 90719—Continued.

90690. EUCALYPTUS BLAXLANDI Maiden and Cambage.

A large tree with ovate-lanceolate coriaceous leaves and dense heads of top-shaped white-dotted fruits half an inch in diameter.

90691. EUCALYPTUS BLOXSOMEI Maiden.

A medium-sized tree with yellow flaky bark, thick yellow-green shining ovate-lanceolate sword-shaped leaves 5 to 8 inches long, umbels of small flowers gathered into heads, and urn-shaped fruits nearly an inch long.

90692. EUCALYPTUS DALRYMPLEANA Maiden.

A large tree, often 150 feet high and 10 feet in diameter, with white bark in spring and later changing to vivid red. The dull-green sword-shaped black-dotted leaves are 5 inches long and an inch wide.

90693. EUCALYPTUS DEALBATA A. Cunn.

A small stunted tree with rugose bark separating in scales, leaving the inner bark white and smooth. The glaucous-white ovate leaves are 4 inches long, and the clusters of three to six flowers are followed by hemispherical fruits about a quarter of an inch in diameter.

90694. EUCALYPTUS EXSERTA F. Muell.

A medium-sized tree with rough, fissured, ash-brown bark, sword-shaped leaves 3 to 6 inches long, axillary clusters of three to eight flowers on long pedicels, and nearly globular fruits one-third inch in diameter.

90695. EUCALYPTUS GIGANTEA Hook. f.

A large tree often 300 feet high and 30 feet in diameter, with white bark and smooth glaucous branchlets. The ovate-lanceolate leaves are 4 to 6 inches long, and the small flowers, numerous in dense heads, are followed by spherical fruits.

90696. EUCALYPTUS MACARTHURI Deane and Maiden.

A tree up to 80 feet high and 4 feet in diameter, with thick narrowly sword-shaped leaves, umbels of five to eight small flowers, and very small nearly hemispheric fruits.

90697. EUCALYPTUS MICRANTHA DC.

A large tree with smooth deciduous bark, leaving the trunk spotted or variegated. The thick coriaceous sword-shaped leaves are 6 to 8 inches long, and the axillary clusters of four to eight flowers are followed by pear-shaped fruits less than a quarter of an inch in diameter.

90698. EUCALYPTUS MICROCARPA Maiden.

A large tree with gray or white bark, lanceolate coriaceous leaves 4 inches long, and panicles made up of clusters of three to seven small flowers followed by very small subcylindrical fruits.

90699. EUCALYPTUS NICHOLI Maiden and Blakely.

A small tree 30 to 40 feet high and 2 feet in diameter, with drooping branches resembling a weeping willow. The thin narrowly lanceolate leaves are 2 to 5 inches long, the flowers are in heads of 5 to 10, and the hemispherical fruits are a quarter of an inch long.

90677 to 90719—Continued.

90700. EUCALYPTUS NITENS (Deane and Maiden) Maiden.

A large tree up to 300 feet high and 15 feet in diameter, with thick shining sword-shaped leaves sometimes a foot long and 3 inches wide, but usually smaller. The small flowers are in heads of about seven, and the slightly angled ovoid fruits are a quarter of an inch long.

90701. EUCALYPTUS NUMEROSA Maiden.

A large tree up to 150 feet high and 3 feet in diameter, with fibrous bark, thin lanceolate leaves 4 to 7 inches long, flowers in dense umbels of 20 to 40, and pear-shaped fruits less than a quarter of an inch long.

90702. EUCALYPTUS QUADRANGULATA Deane and Maiden.

A tree 80 to 100 feet high and 2 to 4 feet in diameter, with angular branchlets, sinuate-margined lanceolate leaves 4 to 6 inches long, green on both sides, and umbels of four to eight flowers followed by small bell-shaped fruits.

90703. EUCALYPTUS RADIATA Sieber.

A small tree with persistent fibrous bark, linear to lanceolate leaves 2 to 4 inches long, clusters of four to eight flowers, and subglobose-truncate fruits a quarter of an inch long.

90704. EUCALYPTUS ROBERTSONI Blakely.

A large tree up to 180 feet high and 6 feet in diameter, with pale slaty green lanceolate leaves 5 to 8 inches long, axillary whorls of 10 to 20 flowers, and club-shaped fruits a quarter of an inch long.

90705. EUCALYPTUS RUBIDA Deane and Maiden.

A tree with smooth white bark showing plum-colored patches, thick dull-green narrowly lanceolate leaves, and small flowers in clusters of three and four, followed by top-shaped fruits a quarter of an inch in diameter.

90706. EUCALYPTUS TERMINALIS F. Muell.

A medium-sized tree with grayish-brown bark, sword-shaped leaves 5 to 7 inches long, flowers in clusters of three to six, and urn-shaped fruits an inch long.

90707. EUCALYPTUS URCEOLARIS Maiden and Blakely.

A tree 50 to 80 feet high and 4 feet in diameter, with rough fibrous bark, thick obliquely lanceolate leaves 3 to 8 inches long, flowers in axillary umbels forming panicles, and small urn-shaped fruits a quarter of an inch long.

90708 to 90711. FICUS spp. Moraceae. **Fig.**

90708. FICUS BELLENGERI C. Moore.

A tall tree with leathery ovate leaves 6 inches long, dark green above and light green beneath, and reddish fruits 2 to 3 inches in diameter.

For previous introduction see 77996.

90677 to 90719—Continued.

90709. FICUS HENNEANA Miquel.

A shrub or small tree with coriaceous oblong leaves 3 to 5 inches long, and small globular white-mottled fruits less than an inch in diameter.

For previous introduction see 78598.

90710. FICUS MACROPHYLLA Desf. **Moreton Bay fig.**

A large tree with a broad head, broadly oblong coriaceous leaves 10 inches long and 4 inches broad, and globular or pear-shaped fruits nearly an inch in diameter. Said to be the grandest of Australian street trees.

For previous introduction see 52865.

90711. FICUS RUBIGINOSA Desf. **Rusty fig.**

A tree with spreading branches throwing out woody roots like the banyan tree. The elliptical coriaceous leaves, 3 to 4 inches long, are smooth above and covered with rusty tomentum beneath.

For previous introduction see 37141.

90712 to 90716. MELALEUCA spp. Myrtaceae.

90712. MELALEUCA ARMILLARIS J. E. Smith. **Drooping melaleuca.**

A tall shrub with gracefully drooping branchlets, narrowly linear leaves less than an inch long, and cylindrical spikes, 2 inches long, of small white flowers.

90713. MELALEUCA ELLIPTICA Labill.

A tall evergreen shrub with elliptical evergreen leaves half an inch long and cylindrical spikes of large showy red flowers.

For previous introduction see 79137.

90714. MELALEUCA HYPERICIFOLIA J. E. Smith. **Dotted melaleuca.**

A tall glabrous shrub with opposite lanceolate leaves 1 to 2 inches long, dotted beneath. The rich red flowers are borne in dense spikes 2 inches long and nearly as wide.

For previous introduction see 35886.

90715. MELALEUCA LEUCADENDRON L. **Cajeput-tree.**

The cajeput-tree of India and Australia reaches a height of 80 feet and can be grown on the edges of salt-water swamps where no eucalyptus will survive. The lamellar bark is valuable for preserving fruit wrapped in it. The wood is hard, close-grained, and imperishable underground. The leaves yield as much as 2 per cent of the well-known cajeput oil, closely allied to that of eucalyptus.

For previous introduction see 24166.

90716. MELALEUCA PUBESCENS Schauer (*M. preissiana* Schauer).

A tall shrub or small tree with small linear leaves, half an inch long, crowded on the pubescent branches, and small white flowers borne in loose cylindrical spikes.

For previous introduction see 75566.

90677 to 90719—Continued.

90717. PITHECOLLOBIUM PRUINOSUM Benth. Mimosaceae.

A slender tree with bipinnate leaves made up of broadly ovate leaflets 2 to 3 inches long and terminal panicles made up of heads of small flowers, followed by spirally twisted or contorted and deeply constricted pods.

For previous introduction see 34846.

90718. STERCULIA QUADRIFIDA R. Br. Sterculiaceae. **Bottletree.**

A tree with ovate or cordate leaves 3 to 5 inches long and stellate-tomentose racemes, 2 inches long, of inconspicuous flowers, followed by bright-red fruits which open and show the ovoid black seeds.

For previous introduction see 34873.

90719. VITEX ACUMINATA R. Br. Verbenaceae.

A small tree with hoary pubescent branchlets and digitately compound leaves made up of three to five ovate to lanceolate leaflets 3 to 4 inches long, green on both sides. The small 2-lipped, lavender flowers are in loose axillary and terminal panicles.

90720. FICUS MEGACARPA Merr. Moraceae. **Fig.**

From Manila, Philippine Islands. Seeds collected by M. Ramos at Mount Iraya, Bataan Island, and presented by Eduardo Quisumbing, Botanist, Bureau of Science. Received December 19, 1930.

A woody climbing vine with slender reddish-brown branchlets and ovate coriaceous leaves 2 inches long. The pear-shaped green fruits, mottled with white spots, are 2 to 3 inches long and are borne singly or in pairs on the main trunk. It is native to the Philippines.

90721 to 90727.

From Sydney, Australia. Seeds purchased from Arthur Yates & Co. Received December 20, 1930.

90721 to 90724. ATRIPLEX spp. Chenopodiaceae. **Saltbush.**

90721. ATRIPLEX ANGULATA Benth.

A mealy or scaly-tomentose spreading perennial with angular orbicular leaves on winged petioles. The inconspicuous flowers are in terminal spikes. It is native to South Australia.

90722. ATRIPLEX LEPTOCARPA F. Muell.

A much-branched trailing perennial with a glaucous bloom which covers the whole plant. The leaves, variable in shape, are mostly oblong and from 1 to 2 inches long. In Australia it is sometimes found carpeting the ground over considerable areas, and it is said to possess remarkable drought-resistant qualities.

For previous introduction see 46877.

90723. ATRIPLEX NUMMULARIA Lindl.

A tall shrubby perennial, sometimes reaching a height of 10 feet, and covered all over with downy whitish scales. The leaves are mostly round, rather thick, and toothed along the margins. It is extensively planted and highly valued in central Australia for its remarkable drought-resisting qualities; livestock are very fond of it.

90721 to 90727—Continued.

90724. ATRIPLEX SEMIBACCATA R. Br.

A vigorous, rapid-growing, much-branched perennial which forms a dense mat over the ground to a depth of from 1 to 2 feet. The leaves are small, about 1 inch long, and coarsely toothed along the margins. This plant has been known to flourish on the poorest and most stubborn arid soil, so impregnated with alkali that no other useful plant could grow. It seems to have a remarkable number of virtues, including great frost resistance, palatability, heavy yield, sand-binding qualities, and the habit of spreading freely. Sheep and hogs eat it freely, and a mixture of 3 parts of this forage with 1 part of common hay is readily eaten by horses and cattle.

For previous introduction see 46879.

90725. CYTISUS PROLIFERUS L. f. Fabaceae. **Tagasaste.**

A stout leguminous shrub, up to 12 feet high, of rather lax habit, with long, slender branches and green trifoliolate leaves with silky pubescent lower surfaces. The white flowers are in axillary clusters among the branches. It is native to the Canary Islands, where it is considered an excellent drought-resistant forage plant.

For previous introduction see 65584.

90726. STERCULIA DIVERSIFOLIA Don. Sterculiaceae. **Black kurrajong.**

A tall evergreen tree with shining green leaves, 2 to 6 inches long, which are variable in shape, being both deeply lobed and entire. The nearly ovoid fruits, up to 3 inches long, contain about 20 seeds each which, when ground, make an excellent substitute for coffee. The taproots of the young trees and the young roots of the old trees are used as food, and, when boiled, have a flavor similar to that of turnips, but sweeter. Cattle and sheep are fond of the leaves and branches, and have existed during long dry periods on scarcely anything else. A strong fiber obtained from the bark is used for making fishing nets. It is native to Australia.

For previous introduction see 75662.

90727. TRIFOLIUM CERNUUM Brot. Fabaceae. **Clover.**

An annual 1 foot high, with drooping heads of pale-purple flowers. It is native to Spain.

90728 to 90730. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From Sweden. Plants presented by Henry Sjögren, Heleneborg, Svalöv, through Morgan W. Evans, Bureau of Plant Industry. Received December 20, 1930.

90728. *Bok.*

90729. *Gloria.*

90730. *Noniland.*

90731. SINOJACKIA REHDERIANA Hu. Styracaceae.

From China. Seeds presented by H. H. Hu, of the Fan Memorial Institute of Biology, Peiping, through David Fairchild, Bureau of Plant Industry. Received December 20, 1930.

A native Chinese shrub up to 15 feet high, with obovate to oblanceolate serrulate thin leaves 4 inches long, loose cymose panicles of pendulous white flowers 1 inch across, and grayish-brown fruits, punctate with whitish dots, half an inch in diameter.

90731—Continued.

90732 to 90739.

From Victoria, Australia. Seeds presented by F. J. Rae, Director, Botanic Garden, Melbourne, through Frieda Cobb Blanchard, University of Michigan. Received December 20, 1930.

A collection of native Australian trees and shrubs.

90732. ACACIA CYCLOPS A. Cunn. Mimosaceae. **Cyclops acacia.**

A shrub 6 to 10 feet high, from southwestern Australia. The flowers are in dense globular heads, and the pods are flat coriaceous and twisted. The black spherical seeds are encircled in double folds by a thickened and richly colored funicle. This shrub is used in South Africa for binding drifting sand on seashores.

For previous introduction see 66772.

90733. ACACIA RUPICOLA F. Muell. Mimosaceae.

A glabrous evergreen shrub usually about 6 feet high, native to Victoria and South Australia, with angular branchlets, rigid linear sharp-pointed phyllodes half an inch long, and yellow flowers in small globular heads.

For previous introduction see 80062.

90734. ATRIPLEX MUELLERI Benth. Chenopodiaceae. **Saltbush.**

A mealy white, spreading annual with broadly ovate, coarsely sinuate-toothed leaves 1 to 2 inches long and small inconspicuous flowers in little globular axillary heads.

90735. ATRIPLEX NUMMULARIA Lindl. Chenopodiaceae. **Saltbush.**

For previous introduction and description see 90723.

90736. CASSIA EREMOPHILA A. Cunn. Caesalpiniaceae.

A handsome shrub 5 feet high, with leaves made up of two pairs of narrow leaflets, and yellow flowers. The leaves and pods are said to be eaten by stock.

For previous introduction see 77278.

90737. CASUARINA SUBEROSA Otto and Dietr. Casuarinaceae.

A tree 30 to 40 feet tall, quite similar to *Casuarina equisetifolia*, with smooth slender branchlets. It is considered a valuable fodder tree in the interior districts of Australia, which are subject to drought. The wood is of great beauty for cabinetwork, but should be used only in veneers, as it is apt to split in drying.

For previous introduction see 62663.

90738. EUCALYPTUS CORNUTA Labill. Myrtaceae. **Yate-tree.**

A rapid-growing tree, usually not very high, often planted as a windbreak. The wood is very hard, heavy, tough, and elastic, and is used for vehicles, implements, and boat ribs. The tree prefers moist soil and will endure much rain, but is also quite drought resistant. It has endured a minimum temperature of 23° F. in southern Florida.

For previous introduction see 48987.

90732 to 90739—Continued.

90739. STURTIA GOSSYPIOIDES R. Br. Malvaceae.

A large shrub closely related to cotton (*Gossypium* spp.), with broadly oval stiff leaves up to 2 inches long and large purple flowers.

For previous introduction see 74470.

90740 to 90745. GOSSYPIUM spp. Malvaceae. **Cotton.**

From Belgian Congo. Seeds presented by W. J. Lugard, technical adviser to the Compagnie Cotonnière Congolaise, Brussels, Belgium, through T. H. Kearney, Bureau of Plant Industry. Received December 22, 1930.

Native-grown cotton from French Equatorial Africa.

90740. GOSSYPIUM sp.

Seed covered with green fuzz, from the Moyen Chari region, Ubangi Chari Colony.

90741. GOSSYPIUM sp.

From the Moyen Logone region, Ubangi Chari Colony.

90742. GOSSYPIUM sp.

A mixed sample from Fort Archembault region, Ubangi Chari Colony.

90743. GOSSYPIUM sp.

From Fort Lamy region, Chad Colony.

90744. GOSSYPIUM sp.

From Moyen Logone region, Ubangi Chari Colony.

70745. GOSSYPIUM sp.

A mixed sample from Fort Lamy region, Chad Colony.

90746 to 90776.

From Chihli Province, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received December 22, 1930.

90746. CALAMAGROSTIS EPIGEJOS (L.) Roth. Poaceae. **Grass.**

No. 7443. Sent from Harbin, Manchuria, November 2, 1930, by B. W. Skvortzow.

For previous introduction see 84282.

90747. CHRYSANTHEMUM INDICUM L. Asteraceae.

No. 7437. From the Botanic Garden near Peiping, October 28, 1930. A good fall bloomer which may be valuable in plant breeding.

90748. FORSYTHIA SUSPENSA (Thunb.) Vahl. Oleaceae. **Goldenbell.**

No. 7458. From Peiping, November 8, 1930. An ornamental shrub growing in the court of Cheng Kuo Ssu Temple, near Patachu, Western Hills.

90749 to 90751. LESPEDEZA spp. Fabaceae. **Bushclover.**

Collected at the Botanic Garden, near Peiping, October 28, 1930.

90749. LESPEDEZA DAURICA (Laxm.). Schindler.

No. 7438. Much-branched, white-flowered plants over 4 feet high, woody, but with the appearance of dying to the ground annually.

90746 to 90776—Continued.

90750. LESPEDEZA SERICEA (Thunb.) Miquel.

No. 7439. A white-flowered form, used as an ornamental.

90751. LESPEDEZA DAURICA (Laxm.). Schindler.

No. 7440. Plants 18 to 20 inches high, found growing in front of the Seed Museum.

90752. LESPEDEZA TOMENTOSA (Thunb.) Sieb. Fabaceae. **Bushclover.**

No. 7441. For previous introduction and description see 89745.

90753 to 90755. MELILOTUS spp. Fabaceae. **Sweetclover.**

Nos. 90753 and 90754 were collected in the Botanic Garden, near Peiping, October 28, 1930.

90753. MELILOTUS sp.

No. 7435. A yellow-flowered variety.

90754. MELILOTUS sp.

No. 7436. A white or lavender-flowered variety with more slender flower or seed spikes and smaller seeds than No. 7435 [90753]. It does not seed very abundantly.

90755. MELILOTUS sp.

No. 7457. From Chinglungchiao, November 7, 1930. Collected near the Great Wall.

90756 and 90757. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adsuki bean.**

From the Botanic Garden, near Peiping, October 28, 1930.

90756. No. 7558. Medium-sized, marbled gray and black seed, used cooked as porridge.

90757. No. 7569. Medium-sized, dark reddish-brown beans.

90758. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

No. 7581. Purchased from Hsi Chi Hao, Tunghsien, November 4, 1930. Said to be of bush habit; seeds large and white.

90759. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 7578. Purchased from Hsi Chi Hao, Tunghsien, November 4, 1930. Very small light-buff seed.

90760 to 90768. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

90760. No. 7411. From a farmer in Taipingchuang, October 22, 1930. A medium-sized oval slightly flattened pale-yellow bean with brown hilum.

90761. No. 7412. From a farmer in Nanchuangying, October 22, 1930. A medium-sized oval slightly flattened dark-green bean with pale hilum; germ green.

90762. No. 7420. From a farmer in Tahsinfeng, October 22, 1930. A medium-large oval yellow bean with brown hilum.

Nos. 90763 to 90767 were purchased at Tunghsien, November 4, 1930.

90763. No. 7570. A medium-sized oblong much-flattened black bean with yellow germ. It is used for food and also for forage.

90746 to 90776—Continued.

90764. No. 7571. *Pi Ching* (green skin). A medium-sized oval green bean with dark-brown hilum and green germ. It is used for sprouts.

90765. No. 7572. A medium-sized oval glossy yellow bean with pale to brown hilum; used for bean curd, soy sauce, and sprouts.

90766. No. 7573. *Golden ear-ring.* A mixture of yellow-seeded varieties; used for sprouts, bean curd, and soy sauce.

90767. No. 7574. *Mao Ching* (hairy green soybean). A medium-sized oval green bean with dark-brown hilum, used for sprouts.

90768. No. 7582. Purchased at a small grain store in Tungchou, November 4, 1930. A medium-sized oval green bean with dark-brown hilum and green germ; used for sprouts.

90769. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

No. 7579. *Red kaoliang.* From Tunghsien, November 4, 1930. Medium-small seed with red glumes.

90770. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

No. 7424. From a farmer in the village of Nanchuangying, not far from Tangshan, October 22, 1930.

90771. VICIA AMOENA Fisch. Fabaceae. **Vetch.**

No. 7456. Collected near the Great Wall at Chinglungchiao, November 6, 1930. A perennial hairy vetch, native to Siberia, with erect stems up to 2 feet high and purplish flowers.

For previous introduction see 65291.

90772. VICIA FABA L. Fabaceae. **Broadbean.**

No. 7580. From Tunghsien, November 4, 1930. A medium-sized light-tan bean with black hilum; used for sprouts.

90773 to 90776. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

90773. No. 7508. From Nanchuangying, October 22, 1930. A medium-sized reddish-pink pea; used for food.

Nos. 90774 to 90776 were collected at Tunghsien, November 4, 1930.

90774. No. 7575. A medium-sized white cowpea with brown hilum.

90775. No. 7576. A medium-sized cowpea with light whippoorwill markings.

90776. No. 7577. A medium-sized reddish-pink cowpea.

90777. CLIANTHUS DAMPIERI A. Cunn. Fabaceae.

From South Australia. Seeds presented by A. McTaggart, Council for Scientific and Industrial Research, Canberra. Received December 22, 1930.

From Koonamore Vegetation Reserve. A semishrubby perennial 2 to 4 feet high with ascending or procumbent branches covered with long soft hairs. The compound leaves are made up of 15 to 21 obovate leaflets 1 inch long; and the flowers, four

90777—Continued.

to six in pendent racemes, are 3 inches long and crimson or scarlet, with a handsome black-purple spot in the center.

For previous introduction see 86711.

90778. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From England. Seeds purchased from Sutton & Sons, The Royal Seed Establishment, Reading. Received December 23, 1930.

Double-cut broad red clover, grown in Suffolk, England.

90779. COFFEA AMARA Bruijning. Rubiaceae. **Coffee.**

From Madagascar. Seeds purchased from Rev. P. A. Bjelde, Manambaro, Fort Dauphin. Received December 23, 1930.

A wild coffee, free from caffein. It has a pleasant aroma but a bitter taste.

For previous introduction see 54800.

90780. TIGRIDIA sp. Iridaceae. **Tigerflower.**

From Mexico. Seeds presented by Mrs. Zelia Nuttall, Casa Alvarado, Coyoacan, Distrito Federal, through Max Souviron, Bureau of Plant Industry. Received December 23, 1930.

Mixed varieties from Mrs. Nuttall's garden.

90781 and 90782. CEIBA AESCULIFOLIA (H. B. K.) Britt. and Baker. Bombacaceae.

From Mexico. Seeds collected by Max Souviron, Bureau of Plant Industry. Received December 23, 1930.

A medium-sized, diffusely branched tree, 20 to 30 feet high, with the trunk and larger branches bearing stout coarse spines. The leaves are palmately compound, with five to seven elliptic or obovate leaflets 2 to 8 inches long, usually glaucescent beneath. The flowers, which are white at first and turn brown with age, appear in May, and the fruits ripen in October. The down, consisting of fine unicellular hairs about 1 inch long, may serve the same purpose as kapok for mattresses, cushions, life preservers, and insulation. This tree is native from Vera Cruz across southern Mexico to southern Jalisco and southward to Guatemala.

For previous introduction see 82409.

90781. No. 9. From Tepecoacuileo, Guerrero, December 14, 1930, at an altitude of about 2,000 feet.

90782. From a different tree in the same vicinity.

90783. PASSIFLORA FOETIDA L. Passifloraceae.

From Manila, Philippine Islands. Seeds presented by J. S. Camus, Assistant Director, through P. J. Wester, Bureau of Plant Industry. Received December 23, 1930.

A rapid-growing trailing climbing vine with small purple flowers and delicately flavored yellow fruits less than 1 inch in diameter. It is used as a cover crop for coconuts and rubber, and should make an interesting ornamental in the warmer parts of Florida and California.

For previous introduction see 67724.

90784 to 90800.

From Chosen, Japan. Seeds presented by M. Tozawa, Director, Forest Experiment Station, Keijo. Received December 27, 1930.

90784. ABIES NEPHROLEPIS (Trautv.) Maxim. Pinaceae. **Fir.**

A Siberian conifer up to 100 feet high, resembling the Siberian fir, *Abies sibirica*, but with a rough bark, pubescent branchlets, shorter leaves, and smaller cones.

For previous introduction see 78298.

90785. ACER PSEUDO-SIEBOLDIANUM Komarov. Aceraceae. **Maple.**

A small tree, native to Manchuria, with cordate leaves divided into 9 to 11 lanceolate, serrate lobes and corymbs of purple flowers.

For previous introduction see 82471.

90786 to 90788. ALNUS spp. Betulaceae.

90786. ALNUS JAPONICA Sieb. and Zucc. **Japanese alder.**

A handsome pyramidal tree up to 75 feet high, with dense dark-green elliptic-lanceolate, sharply serrate leaves. It is native to northeastern Asia.

90787. ALNUS HIRSUTA SIBIRICA (Fisch.) C. Schneid.

A handsome tree, native to Siberia, 60 feet high, of broad-pyramidal habit and vigorous growth, with broadly ovate leaves about 5 inches long, which are dark green above and glaucous beneath.

For previous introduction see 82473.

90788. ALNUS HIRSUTA Turcz.

Variety *glabra*. A smooth form.

90789. CORNUS CONTROVERSA Hemsl. Cornaceae. **Giant dogwood.**

A tree, native to Japan, up to 60 feet high, with a trunk 7 feet in girth. The numerous long branches extend at right angles to the trunk, with the lowest branches sometimes touching the ground. The white or slightly yellowish flowers are in flat clusters 6 to 7 inches in diameter, appearing from late May to early June.

For previous introduction see 75442.

90790. FORSYTHIA OVATA Nakai. Oleaceae.

A shrub about 6 feet high with spreading branches, yellowish gray branchlets, ovate serrate or nearly entire leaves 2 to 3 inches long, and amber-yellow flowers 1 inch long, which appear very early in the spring. It is native to Chosen.

For previous introduction see 62284.

90791. FRAXINUS MANDSHURICA Rupr. Oleaceae. **Manchurian ash.**

A handsome ash, often 100 feet high, native to Japan and the adjacent parts of the Asiatic mainland. The leaves are up to 15 inches long, with dull-green bristly leaflets. The tree is said to be susceptible to late spring frosts.

For previous introduction see 82479.

90792. ILEX DUBIA MACROPODA (Miquel) Loes. Aquifoliaceae. **Holly.**

A slender tree up to 30 feet high with pubescent branchlets, coarsely serrate, ovate to elliptic leaves 3 to 6 inches long, and orange-red fruits one-third of an inch in diameter. It is native to Japan.

90793. PINUS TABULAEFORMIS Carr. (*P. leucosperma* Maxim.). Pinaceae. **Pine.**

A pine up to 75 feet high, with dark-gray bark on the trunk, red on the branches, and orange or grayish yellow branchlets. The glaucescent leaves, usually two in a cluster, are stout and 3 to 6 inches long, and the ovoid cones, 2 to 4 inches long, are pale tawny yellow, changing to dark brown and persisting for several years.

For previous introduction see 82484.

90794. PRUNUS SEOULENSIS Lev. Amygdalaceae.

Closely resembling the European bird cherry (*P. padus*), this Asiatic species, native to Chosen, has longer and more numerous erect flower racemes, and in fruit the peduncles become very long.

90795. QUERCUS SERRATA Thunb. (*Q. glandulifera* Blume). Fagaceae. **Oak.**

A white oak up to 70 feet high, native to Japan, Chosen, and China. The oblong-ovate leaves are lustrous bright green and hold their color until late in the autumn. It is usually shrubby under cultivation.

For previous introduction see 75688.

90796. RIBES MANSHURICUM (Maxim.) Komarov. Grossulariaceae. **Currant.**

A variety producing good-sized bunches of red fruits which are large and of good quality.

For previous introduction see 71159.

90797. SPIRAEA TRICHOCARPA Nakai. Rosaceae. **Spirea.**

A shrub 4 to 6 feet high with oblong to oblanceolate, nearly entire leaves 1 to 2 inches long, and pubescent umbellike racemes of small white flowers, followed by pubescent fruits. It is native to Chosen.

90798. STEWARTIA KOREANA Nakai. Theaceae.

A tree up to 45 feet high with broadly elliptic, remotely serrulate leaves 3 to 5 inches long and large white solitary flowers near the ends of the branches. The flowers resemble those of *Stewartia pseudo-camellia*, but are larger and flatter, thus being more showy. It is native to Chosen.

90799. SYRINGA VELUTINA Komarov. Oleaceae. **Lilac.**

A charming shrub with pale-pink deliciously fragrant flowers. In height it ranges from 4 to 8 feet. It is native to Chosen and is quite hardy.

For previous introduction see 70893.

90800. ULMUS PARVIFOLIA Jacq. Ulmaceae. **Leatherleaf elm.**

Received as *Ulmus sieboldii* var. *coreana*. This is said to differ from the typical *U. parvifolia* in being more deciduous and in having a fissured bark and larger fruits more than half an inch across. It is native to Chosen.

90801. FICUS PAYAPA Blanco. Moraceae. **Fig.**

From Manila, Philippine Islands. Seeds presented by P. J. Wester, Bureau of Plant Industry. Received December 29, 1930.

A tree with smooth oblanceolate subcoriaceous leaves 5 to 8 inches long and axillary pairs of nearly globular fruits 1 inch in diameter. It is native to the Philippines.

90802. LIVISTONA ALTISSIMA Zoll. Phoenicaceae. **Palm.**

From Singapore, Straits Settlements. Seeds presented by R. Holttum, Director, Botanic Gardens. Received December 29, 1930.

A graceful palm up to 80 feet high, with fan-shaped leaves. The hard wood is valued by the natives for construction work. It is native to the East Indies.

For previous introduction see 81591.

90803. PINUS NIGRA MAURITANICA Maire and Peyer. Pinaceae.

From Algeria. Seeds presented by Prof. René Maire, University of Algiers, Algiers, through David Fairchild, Bureau of Plant Industry. Received December 29, 1930.

A variety of the Austrian pine distinguished by its smaller size, smaller cones, and larger leaves. It is native to Morocco, south of Djuradjura.

For previous introduction see 80106.

90804 and 90805.

From Africa. Seeds presented by John Gossweiler, Serviços Florestais D'Angola. Received December 29, 1930.

90804. MUSA VENTRICOSA Welw. Musaceae. **Banana.**

A banana 8 to 10 feet high, with a swollen stem 4 feet in diameter at the base. The bright green oblanceolate leaves are 4 to 5 feet long, the drooping panicles are made up of dense flower clusters, and the dry coriaceous fruits, 2 to 3 inches long, are full of dull-black seeds nearly 1 inch in diameter. It is native to tropical Africa.

90805. RUMEX ABYSSINICUS Jacq. Polygonaceae.

As a source of greens during the hot summer months the Abyssinian rumex is of great promise. Seed may be sown in the greenhouse or hotbed in early spring and the plants set out as soon as the soil can be worked. The plants grow 7 to 8 feet in height and continue to yield greens until cut down by frost in late autumn. The leaves are cooked and served in the same manner as spinach, but care must be taken to change the water, in cooking, to eliminate excessive acidity.

For previous introduction see 58482.

90806 to 90829. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Cuba. Cuttings obtained by Ernst Artschwager, Bureau of Plant Industry. Received December 29, 1930.

90806. *No. 28.*

90807. *S. C. 12–4.*

90808. *Uba.*

90806 to 90829—Continued.

90809. *Crista Oire.*

90810. *P. O. J. 2878.*

90811. *No. 2725.*

90812. *No. 2364.*

90813. *B. florium.*

90814. *No. 2883.*

90815. *No. 1228.*

90816. *No. 2–878.*

90817. *No. 2725.*

90818. *No. 2364.*

90819. *Java 311.*

90820. *Java 310.*

90821. *Barbados white sport.*

90822. *Black figi.*

90823. *P. O. J. 2714.*

90824. *Kavangeria.*

90825. *H. G. 12079.*

90826. *No. 979.*

90827. *Yellow bamboo.*

90828. *H. G. 9072.*

90829. [Received without label.]

90830. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From France. Seeds purchased from Tézier Frères, Valence sur Rhone. Received December 30, 1930.

French red clover (Valence grown).

90831. FORSTERONIA FLORIBUNDA (Swartz) A. DC. Apocynaceae.

From Jamaica. Seeds presented by M. S. Goodman, Superintendent, Hope Gardens, Kingston. Received December 30, 1930.

A trailing shrub with oblong bluntly mucronate leathery leaves 2 to 3 inches long, and terminal cymes of whitish wheel-shaped flowers. It is native to Jamaica and is of possible value as a rubber-producing plant.

90832 to 90836. TRITICUM spp. Poaceae. **Wheat.**

From Peru. Seeds presented by M. E. Ochiozola, Chief, Estación Experimental Agricola, Lima. Received December 30, 1930.

A collection of northern wheats which have been acclimatized to Peru.

90832 to 90835. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). **Common wheat.**

90832. *Kanred.* From Yanamarca, Jauja, through the Comision Agronomica de Junin.

90833. *Manitoba.* From Yanamarca, Jauja, through the Comision Agronomica de Junin.

90834. *Marquis.* From the Granja Escuela del Cuzco, Cuzco Department.

90835. *Northern Spring.* From the Granja Escuela del Cuzco, Cuzco Department.

90836. TRITICUM TURGIDUM L. **Poulard wheat.**

Chumpe Rojo. From the Hacienda Jarria, Cerro de Pasco, Junin Department.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 106

Washington, D. C. ▼ Issued November, 1932

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1931 (Nos. 90837–92336)

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INTRODUCTORY STATEMENT

The present inventory covers the period from January 1 to March 31, 1931 (Nos. 90837 to 92336) and lists the seeds and plants received by the Division of Foreign Plant Introduction, Bureau of Plant Industry, during that time. This inventory, perhaps more than any other to date, records an unusually large percentage of importations made for the particular use of specialists within the department and in related institutions. This is particularly illustrated by the collections of vegetables including beans, spinach, squash, melons, cabbage, eggplant, tomato, lettuce, etc., from Africa, China, India, Siam, Turkey, Japan, and Bulgaria; a considerable collection of types of native apricot, grape, and pistache; and several collections of seeds of ornamentals for definite tests.

The inventory includes considerable collections of soybeans (Nos. 91003–91005, 91071–91181, 91193–91195, 91340–91350, 91556–91561, 91678–91734, 92062–92066) from Dorsett and Morse, by direct collections and by purchase and exchange at their direction from Manchuria, Chosen, and China.

An interesting group of acacias (Nos. 92321–92325) was presented by Dr. Mario Calvino who has been working with hybrid acacias and has selected seedlings, particularly with a view to increasing winter flowering.

Other acacias were presented in a collection of seeds (Nos. 92326–92332) sent in by the director of the Botanic Gardens at Sydney, New South Wales, who also contributed seeds of various shrubs and small trees that should be useful for the southern Pacific coast area.

The inventory also records the introduction of various maples particularly desired for the permanent study collection at Glenn Dale, Md.; the continued introduction of ornamental plants for the collections at the same garden, and similar material for the study collections at the Plant Introduction Garden at Coconut Grove, Fla.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., April 17, 1932.

125623—32——1

INVENTORY[1]

90837 to 90865.

From New South Wales, Australia. Seeds Presented by the Director, Botanic Gardens, Sydney. Received January 2, 1931.

90837 to 90842. ACACIA spp. Mimosaceae.

90837. ACACIA CRASSIUSCULA Wendl. (*A. adunca* A. Cunn.).

A shrub several feet high with acutely angled branchlets, thick linear falcate 1-nerved phyllodes 2 inches long, and short racemes made up of small dense globular heads of 20 or more flowers. It is native to Australia and Tasmania.

For previous introduction see 90677.

90838. ACACIA BUXIFOLIA A. Cunn.

An Australian shrub 4 feet high, with angular branchlets and small rather thick phyllodia. The short racemes, scarcely longer than the phyllodia, bear globular heads of flowers.

For previous introduction see 75581.

90839. ACACIA DECORA Reichenb.

A shrub with spatulate phyllodes 2 inches long and numerous racemes made up of globular heads of small flowers. Native to Queensland, Australia.

For previous introduction see 75582.

90840. ACACIA DISCOLOR Willd.

An unarmed shrub or small tree native to southeastern Australia and Tasmania. The terminal axillary clusters of yellow flowers are produced during the autumn.

For previous introduction see 75587.

90841. ACACIA MELANOXYLON R. Br.

An Australian evergreen tree up to 100 feet high, with lanceolate leathery phyllodes 4 inches long, heads of creamy flowers in short racemes, and reddish-brown twisted pods. The dark wood is very similar to black walnut and is used for the same purposes. The tree makes a rapid growth while young.

90837 to 90865—Continued.

For previous introduction see 76921.

90842. ACACIA SUAVEOLENS (J. E. Smith) Willd.

An Australian shrub up to 6 feet high with linear to lanceolate phyllodes and small heads of yellow flowers in axillary racemes.

For previous introduction see 78670.

90843. BANKSIA MARGINATA Cav. Proteaceae.

Usually a shrub 10 to 15 feet high, but varying from a low straggling shrub to a tree of considerable size. The entire or serrate leaves, 1 to 2 inches long, vary from broadly linear to oblong-lanceolate, with recurved margins, and are white beneath. The flowers are in spikes varying from nearly globular to oblong-cylindrical and up to 4 inches long. It is native to Australia.

90844 to 90848. CALLISTEMON spp. Myrtaceae.

90844. CALLISTEMON ACUMINATUS Cheel.

An Australian shrub with lanceolate sharp-pointed leaves and spikes of ornamental flowers.

For previous introduction see 75548.

90845. CALLISTEMON HORTENSIA Hort.

A name for which a place of publication or a description has not been found.

90846. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). **Lemon bottlebrush.**

An evergreen shrub up to 12 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. Native to southeastern Australia.

For previous introduction see 78532.

90847. CALLISTEMON CITRINUS × ACUMINATUS.

A hybrid between *Callistemon citrinus* and *C. acuminatus*.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

90837 to 90865—Continued.

90848. CALLISTEMON LINEARIS DC. **Bottlebrush.**

A tall shrub or small tree up to 30 feet high, closely resembling *C. citrinus*, but the leaves are much narrower, and the stamens, an inch long, are dark or pale red. It is native to Australia.

90849. CARMICHAELIA EXSUL F. Muell. Fabaceae.

A low shrub with flattened branchlets, compound leaves made up of three to five obovate, emarginate leaflets nearly 1 inch long, and axillary peduncles bearing one or two yellowish-white flowers. It is native to Lord Howe Island.

90850. CASSIA ARTEMISIOIDES Gaud. Caesalpiniaceae. **Wormseed senna.**

An erect bushy shrub covered with silky white tomentum. The leaves are made up of three to six pairs of linear-terete leaflets 1 inch long, and the yellow flowers are in short dense racemes. Native to Australia.

90851. CASSIA EREMOPHILA A. Cunn. Caesalpiniaceae.

A handsome Australian shrub 5 feet high, with leaves made up of two pairs of narrow leaflets and yellow flowers. The leaves and pods are said to be eaten by stock.

For previous introduction see 77278.

90852. DORYPHORA SASSAFRAS Endl. Monimiaceae.

A tree of considerable size but of irregular growth, the whole plant aromatic. The ovate to oblong-lanceolate, serrate leaves, reticulate beneath, are 2 to 4 inches long, and the small inconspicuous flowers are in axillary clusters of three. It is native to Australia.

90853. GEIJERA PARVIFLORA Lindl. Rutaceae.

The *wilga* is a tall shrub or a tree, native to the interior of New South Wales, where it reaches a height of about 30 feet. It has slender pendulous branches, narrow leaves 3 to 6 inches long, and, when well developed, has a highly ornamental appearance with something of the aspect of a weeping willow. It has remarkable drought-enduring qualities, and the leaves are often fed to sheep, which are very fond of them.

For previous introduction see 64000.

90854 to 90856. GREVILLEA spp. Proteaceae.

90854 and 90855. GREVILLEA BANKSII R. Br.

For previous introduction see 76639.

90854. An ornamental Australian red-flowered shrub or small tree 8 to 10 feet high.

90855. Variety *alba*. A white-flowered form.

90856. GREVILLEA HILLIANA F. Muell.

A large evergreen tree 60 feet or less high, native to Australia, with leaves varying from elliptical to entire, 6 to 12 inches long, and deeply pinnatifid with five or seven lanceolate lobes. The small red flowers are in dense cylindrical racemes 4 to 8 inches long.

For previous introduction see 80068.

90837 to 90865—Continued.

90857. HYMENOSPORUM FLAVUM (Hook.) F. Muell. Pittosporaceae.

An ornamental evergreen shrub or tree, sometimes 50 feet high, native to Australia. The leaves are up to 9 inches long, and the fragrant flowers, yellow marked with red at the throat, are over an inch across. Its symmetrical, pyramidal habit and rapid growth make it promising as a street tree for the Gulf States and California.

For previous introduction see 81170.

90858. LEPTOSPERMUM ODORATUM Cheel. Myrtaceae.

An upright shrub 3 to 5 feet high with angular branchlets, oblong to obovate, emarginate leaves 1 to 2 inches long, and clusters of two to five small white flowers near the tips of the branchlets. The leaves when bruised emit a pleasant odor. It is native to Australia.

90859. MELALEUCA ELLIPTICA Labill. Myrtaceae.

A tall evergreen shrub, native to Western Australia, with elliptical leaves one-half inch long and cylindrical spikes of large showy red flowers.

For previous introduction see 79137.

90860. MELALEUCA HYPERICIFOLIA J. E. Smith. Myrtaceae. **Dotted melaleuca.**

A tall shrub with opposite, lanceolate to oblong leaves 1 to 2 inches long, dotted beneath, and spikes, 2 inches long and wide, of deep-red flowers, the axis growing out as a leafy shoot. It is native to Australia.

90861. SYNCARPIA GLOMULIFERA (J. E. Smith) Niedenzu (*Metrosideros glomulifera* J. E. Smith). Myrtaceae.

A tall slender evergreen tree, native to Australia, with broadly ovate leaves 2 to 3 inches long, appearing as if in whorls from two pairs being close together. The small white flowers are in globular clusters of 6 to 10 on short peduncles at the base of the new shoots. The wood is valuable for posts and underground construction work.

For previous introduction see 80073.

90862. OXYLOBIUM LANCEOLATUM (Vent.) Druce (*O. callistachys* Benth.). Fabaceae.

A tall evergreen shrub, native to Australia, with whorls of lanceolate leaves 3 to 5 inches long and yellow flowers in dense terminal racemes 6 inches long.

For previous introduction see 79954.

90863 to 90865. PIMELEA spp. Thymelaeaceae.

90863. PIMELEA FERRUGINEA Labill.

A much-branched shrub 1 to 2 feet high, with opposite crowded, ovate to oblong, entire leaves less than 1 inch long and globular heads of small rose-colored flowers covered with silky hairs. It is native to Australia.

90864. PIMELEA LINIFOLIA J. E. Smith.

An erect shrub 1 to 3 feet high with slender, rust-brown branches, linear to oblong leaves half an inch long, and terminal globular heads of small white flowers. It is native to Australia.

90837 to 90865—Continued.

90865. PIMELEA TRICHOSTACHYA Lindl.

An erect slender branching annual about 1 foot high, with alternate, linear, concave leaves half an inch long and hairy spikelike racemes 1 to 2 inches long of small yellowish flowers. It is native to Australia.

90866 to 90893.

From Cuba. Material collected by F. G. Walsingham at Harvard Botanic Garden, Soledad, Cienfuegos. Received January 5, 1931.

90866 and 90867. CITRUS GRANDIS (L.) Osbeck. Rutaceae. **Grapefruit.**

90866. Harvard No. 2. Bud wood of a selection from the Foster grapefruit, made by Robert Grey. An excellent pink-fleshed variety, with very thin skin and very juicy.

90867. Bud wood of a hybrid between Washington Naval orange and grapefruit, originated by Robert Grey. The fruit has the appearance of a grapefruit, but tastes as sweet as an orange.

90868. ALPINIA SANDERAE Sand. Zingiberaceae. **Banded alpinia.**

A tropical, gingerlike plant, native to New Guinea, cultivated for its leaves, which are narrowly ovate, about 5 inches long, rich shining green, and regularly and closely striped in broad bands of white leading from the midrib to the margin.

90869. CALYPTROGYNE OCCIDENTALIS (Swartz) G. Maza. Phoenicaceae. **Palm.**

A beautiful and rare native palm with a straight smooth stem sometimes reaching a height of 50 feet. The pinnate leaves are from 8 to 12 feet long.

For previous introduction see 87502.

90870. CEREUS HEXAGONUS (L.) Mill. (*C. lepidotus* Salm-Dyck). Cactaceae.

A tall columnar cactus up to 45 feet high, branching at the base; the joints are usually six-angled. The flowers are 8 to 10 inches long, with the outer segments purple and the inner ones white. The ovoid edible fruits are 3 to 6 inches long and have white or pinkish pulp. It is native to the West Indies and the northern part of South America.

90871. CLERODENDRUM MACROSIPHON Hook. f. Verbenaceae. **Glorybower.**

Cuttings of an erect shrub with opposite oblanceolate notched or pinnatifid leaves and terminal cymes of tubular pure white flowers 4 to 5 inches long with red stamens 2 inches long. It is native to tropical Africa.

90872. CLERODENDRUM PENDULIFLORUM Wall. Verbenaceae.

Cuttings of a shrub up to 6 feet high with lanceolate, nearly entire leaves 5 to 8 inches long and pendulous panicles of small white flowers followed by fleshy dark-purple fruits a third of an inch in diameter, subtended by the enlarged reddish calyx. It is native to Burma.

90873. COLPOTHRINAX WRIGHTII Griseb. and Wendl. Phoenicaceae. **Palm.**

90866 to 90893—Continued.

Seedlings of a Cuban fan palm with a trunk up to 40 feet high having a bottle-shaped base.

For previous introduction see 89174.

90874. CORDIA ALBA (Jacq.) Roem. and Schult. Boraginaceae.

Seedlings of a large bushy shrub up to 18 fet high, common along the eastern edge of the Valley of San Luis, Cuba. This shrub branches close to the ground, sending up long stiff shoots well furnished with dark-green foliage. The leaves are alternate, entire, obovate to ovate-elliptical, 3 to 4 inches long, with the surface covered with short bristly hairs. The pale yellow flowers, about half an inch in diameter, are borne in broad flat-topped corymbs sometimes a foot across. The oblong-obovate fruits are half an inch in length and pearly white when ripe. It is apparently a good honey plant and of considerable ornamental value.

For previous introduction see 40988.

90875. DIOSPYROS TEXANA Scheele. Diospyraceae. **Persimmon.**

A large shrub or small tree with small obovate leaves and fruits about an inch in diameter.

90876. ASSONIA NATALENSIS (Sond.) Kuntze (*Dombeya natalensis* Sond.). Sterculiaceae. **Cape-weddingflower.**

Cuttings of a shrub or small tree, native to southern Africa, with cordate, angular, toothed leaves and axillary, 6-flowered to 8-flowered umbels of large pure-white fragrant flowers.

90877. ECHITES RUBRO-VENOSA Linden. Apocynaceae.

Seedlings of a tropical American twining shrub with simple opposite leaves. The upper surface of these leaves is covered with a network of bright-red lines, at times golden yellow and emerald green.

90878. EUGENIA sp. Myrtaceae.

Seedlings of a large compact bush or small tree, native to Cuba.

90879. EUPHORBIA PULCHERRIMA Willd. Euphorbiaceae. **Poinsettia.**

Variety *rubicunda*. Cuttings of a very ornamental variety, similar in habit and growth to the common poinsettia, but the upper leaves and bracts instead of being bright red are orange pink.

90880. GRAPTOPHYLLUM HORTENSE Nees (*G. pictum* Griff.) Acanthaceae.

Cuttings of a shrub 6 to 8 feet high with opposite entire elliptic leaves irregularly marked with yellow along the midrib. The widespreading crimson flowers are in axillary whorls. Native to tropical Asia.

90881. HELICONIA LEHMANNI Hort. Musaceae.

Rootstocks of a stocky, broad-leaved, bananalike plant with yellow stems; the leaves are striped with creamy yellow.

90882. IXORA ACUMINATA Roxb. Rubiaceae.

Seedling plants of a glabrous shrub up to 6 feet high, native to India, with linear-oblong to elliptic leaves and dense cymes of tubular fragrant white flowers nearly an inch across.

90866 to 90893—Continued.

90883. JATROPHA HASTATA Jacq. Euphorbiaceae.

Cuttings of a shrubby perennial about 3 feet high with obovate to oblanceolate hastate leaves and umbellike cymes of small scarlet flowers. It is native to Cuba.

90884. JUGLANS INSULARIS Griseb. Juglandaceae. **Cuban walnut.**

Seedlings of a comparatively rare Cuban tree found along streams up to 2,000 feet altitude. It is a slender tree sometimes over 40 feet high with foliage somewhat finer than that of *Juglans nigra*. The nuts resemble those of *J. nigra* in appearance, but are smaller, and the kernels are removed with difficulty, as the septae are very thick and woody. In its present wild state the Cuban walnut is of little horticultural value, but with improvement by selection it may become an excellent nut for tropical regions.

For previous introduction see 58810.

90885. LIGUSTRUM NEPALENSE Roxb. Oleaceae. **Nepal privet.**

Seedlings of an evergreen shrub or small tree with pubescent branchlets, oblong to ovate leaves 2 to 5 inches long, and large broad panicles of small white fragrant flowers, followed by dark-blue fruits. It is native to the temperate slopes of the Himalayas in India.

90886. LITCHI CHINENSIS Sonner. Sapindaceae. **Lychee.**

Seedlings.

90887. MABA CARIBAEA (A. DC.) Hiern. Diospyraceae.

Cuttings of a Cuban tree, with branchlets covered with a pale-brown, soft pubescence and obovate coriaceous leaves 3 inches long. The brownish flowers are in small cymes, and the squarely subglobose, shining orange-colored fruits are 1 inch in diameter.

90888. RUSSELLIA SARMENTOSA Jacq. Menthaceae.

Seedlings of a shrub native to Mexico and Cuba, with 4-angled branches, subcoriaceous, coarsely crenate-serrate broadly ovate leaves 2 inches long, and cymes of 2-lipped, bright-red flowers.

90889. SABAL DEALBATA Hort. Phoenicaceae. **Palm.**

Seedlings of a dwarf, stemless fan palm with numerous glaucous-green leaves of fine form.

90890. SARACA INDICA L. Caesalpiniaceae. **Common saraca.**

Seedlings of a medium-sized Indian tree with pinnately compound leaves. The 6 to 12 oblong leathery leaflets are 6 to 9 inches long, and the orange-red, fragrant flowers are in compact panicles.

For previous introduction see 78524.

90891. TERMINALIA MYRIOCARPA Heurck and Muell. Arg. Combretaceae.

Cuttings of a deciduous tree 80 to 100 feet in height, found in open forest at about 500 feet altitude. The fruits appear in January and February, before the elliptical leaves. This may be useful as a shade tree.

For previous introduction see 53470.

90866 to 90893—Continued.

90892. THUNBERGIA VOGELIANA Benth. Acanthaceae.

Cuttings of an erect perennial with large, ovate to oblong, dark-green leaves, and funnelform, blue-violet flowers with a yellowish throat, 2 inches across, appearing in the summer. It is native to tropical Africa.

90893. TINNEA AETHIOPICA Kotschy and Peyr. Menthaceae.

Cuttings of an ornamental, tropical African shrub about 4 feet high with many branches and oblong, short-stemmed leaves. The dark purplish-brown flowers are in axillary whorls and have an odor like violets.

90894 to 90942.

From Cuba. Seeds collected by F. G. Walsingham at Harvard Botanic Garden, Soledad, Cienfuegos. Received January 5, 1931.

90894. ALLOPHYLUS OCCIDENTALIS (Swartz) Radlk. Sapindaceae.

A spreading, pubescent shrub with trifoliolate leaves made up of elliptical, sinuate serrate leaflets and racemes of inconspicuous flowers followed by red berries. It is native to the West Indies.

90895. ELETTARIA CARDAMOMUM (L.) Maton (*Amomum cardamomum* L.). Zinziberaceae. **Cardamon.**

A perennial with large leafy shoots. The fruits of this tropical Asiatic plant are used as a spice.

90896. AMPELOCISSUS MARTINI Planch. Vitaceae.

An ornamental vine, native to the Philippine Islands, which should do well in the sandy soils in southern and central Florida. It makes a large tuberous root, and the vines, which are covered with stiff hairs, die annually after fruiting. The grapelike fruits make excellent jelly.

90897. ARIKURYROBA SCHIZOPHYLLA (Mart.) Bailey (*Cocos schizophyllus* Mart.). Phoenicaceae. **Palm.**

A slender, straight-stemmed, pinnate-leaved palm, native to tropical America.

For previous introduction see 88107.

90898. BARLERIA ALATA S. Moore. Acanthaceae.

A small shrub with attractive yellow flowers; native to southwestern Africa.

90899 and 90900. BAUHINIA TOMENTOSA L. Caesalpiniaceae. **St. Thomas tree.**

For previous introduction see 73922.

90899. An erect tropical shrub with pale-yellow flowers, native to India.

90900. Received as *B. wallacei*.

90901. BOURRERIA SUCCULENTA Jacq. Boraginaceae.

A shrub or small tree up to 15 feet high with oblong-ovate leaves 2 to 5 inches long and spreading corymbs of small white flowers followed by yellow fruits. It is native to the West Indies.

90902. CAPPARIS FLEXUOSA L. Capparidaceae.

A shrub or small tree up to 25 feet high, with long flexuose branches, ob-

90894 to 90942—Continued.

long leaves 2 to 3 inches long, clusters of small white or pale-rose flowers, and fruits 3 to 7 inches long which open gradually and expose the bright red inside. It is native to Cuba.

90903. CEREUS REPANDUS (L.) Mill. Cactaceae.

A tall, treelike cactus up to 30 feet high, branched at the top, native to tropical America. The narrowly funnelform, nocturnal flowers are 3 to 4 inches long and dark green. The oblong, dark-red fruits are 1 to 2 inches long and have white pulp.

90904. CITHAREXYLUM CORDATUM Hort. Verbenaceae.

A name for which a place of publication has not been found. Said to be a small tree with spikes of small white flowers and dark berries, native to Cuba.

90905. CLERODENDRUM PENDULIFLORUM Wall. Verbenaceae.

For previous introduction and description, see 90872.

90906. CLITORIA TERNATEA L. Fabaceae.

An ornamental vine with white, double, pea-shaped flowers.

90907. BUTIA ERIOSPATHA (Mart.) Becc. (*Cocos eriospatha* Mart.). Phoenicaceae. **Apricot palm.**

A handsome pinnate-leaved palm with violet-colored stems, creamy flowers, and edible yellow fruits the size of a small plum. Native to Brazil.

For previous introduction see 73923.

90908 to 90910. COLUBRINA spp. Rhamnaceae.

90908. COLUBRINA CUBENSIS (Jacq.) Brongn.

A shrub or small tree up to 18 feet high, with branchlets, leaves, and inflorescence densely velvety pubescent. The thick, oblong leaves are 2 to 5 inches long, and the small yellow flowers are followed by capsules with shining black seeds. It is native to Cuba.

90909. COLUBRINA FERRUGINOSA Brongn.

A low tree, native to the West Indies, with rusty tomentose branchlets, ovate to oblong, entire leaves 6 inches long, yellowish-green flowers in umbellike clusters, and small black fruits with shining black seeds.

90910. COLUBRINA RECLINATA (L'Her.) Brongn.

A native Cuban shrub or low tree with elliptical lanceolate, glandular margined leaves 3 inches long, small greenish-yellow flowers, and purplish fruits.

90911 to 90913. CORDIA spp. Boraginaceae.

90911. CORDIA ALBA (Jacq.) Roem. and Schult.

For previous introduction and description see 90874.

90912. CORDIA BRACHYCALYX (Britt.) Urb.

90894 to 90942—Continued.

A tree similar to *Cordia sebestena*, but having much rougher leaves and yellow or orange fruits. It is native to the West Indies.

90913. CORDIA TREMULA Griseb.

A large tree with broadly ovate, repand-crenate leaves, 3 to 4 inches long, and lax cymes of lemon-yellow flowers followed by greenish-white fruits. It is native to Barbados.

90914. CYRTOSPERMA SENEGALENSE (Schott) Engler. Araceae.

A curious aroid which sends up its spathe on a spiny stem 10 feet high. The spathe itself is 16 inches long. The plant requires wet sandy soil, tropical conditions, and moist atmosphere.

For previous introduction see 75271.

90915. DIOSPYROS DISCOLOR Willd. Diospyraceae. **Mabolo.**

A handsome tree with dark-green shiny leaves, silky underneath. The edible fruits, about the size of a peach, are of good quality.

90916. HEBESTIGMA CUBENSE (H. B. K.) Urban (*Gliricidia platycarpa* Griseb.). Fabaceae.

A shrub or tree with opposite, pinnate leaves made up of seven to nine ovate leaflets 2 to 4 inches long and racemes of rose-purple flowers appearing before the leaves. It is native to Cuba.

90917 to 90919. HIBISCUS spp. Malvaceae.

90917. HIBISCUS CRYPTOCARPOS A. Rich.

A native Cuban shrub with long petioles, cordate, palmately 5-lobed leaves 3 to 4 inches long and wide, and solitary plum-colored flowers.

90918. HIBISCUS MUTABILIS L. **Cotton rosemallow.**

A double variety of a tall East Indian shrub with large broad, cordate leaves and large white flowers which change to red. It blooms in summer and late autumn and is considerably planted in the Bermuda Islands in gardens and hedges.

For previous introduction see 50156.

90919. HIBISCUS SORORIUS L.

A shrub with cordate-crenate leaves and axillary, rose-colored flowers an inch across. It is native to the West Indies.

90920. ABUTILON sp. Malvaceae.

A shrubby plant, not very ornamental, with small yellow flowers and bark which may be useful for fiber. It is native to Cuba.

90921. JACQUINIA ACULEATA (L.) Mez. Theophrastaceae.

A native West Indian shrub 2 to 3 feet high with spiny tipped, ovate-lanceolate leaves 1 inch long, in whorls of five to eight. The small white flowers, in lax drooping fascicles, are followed by small red fruits.

90922. LATANIA LODDIGESII Mart. Phoenicaceae. **Palm.**

90894 to 90942—Continued.

A low spineless palm, native to Mauritius, with rounded fan-shaped leaves, 3 to 5 feet long, and pear-shaped fruits over 2 inches long.

For previous introduction see 88119.

90923. LICUALA SPINOSA Thunb. Phoenicaceae. **Palm.**

A beautiful fan palm, native to the East Indies, with graceful stems 20 to 25 feet high, produced in groups.

For previous introduction see 88120.

90924. LIGUSTRUM AMURENSE Carr. Oleaceae. **Amur privet.**

A shrub up to 15 feet high, with upright branches, elliptic to oblong leaves 1 to 2 inches long, and panicles of small white flowers followed by globose-ovoid, slightly bloomy black fruits. Native to northern China.

90925 to 90927. MALPIGHIA spp. Malpighiaceae.

90925. MALPIGHIA CUBENSIS H. B. K.

A shrub with lanceolate, entire leaves having stinging hairs on the under side. The small, reddish flowers are in axillary corymbs and are followed by red fruits half an inch long.

90926. MALPIGHIA SUBEROSA Small.

A small tree with oblong-ovate, crenulate, coarsely reticulated leaves 3 to 5 inches long and cymes of small pink or white flowers, followed by ovoid, yellow-red fruits. It is native to Cuba.

90927. MALPIGHIA sp.

A small upright tree with bright red berries about the size of cherries.

90928. MELIA AZEDARACH L. Meliaceae. **Chinaberry.**

Variety *sempervirens*. A form with light-lilac, fragrant flowers which are produced continuously throughout the year.

90929. OCOTEA CORIACEA (Swartz) Britton (*Nectandra coriacea* Griseb.). Lauraceae.

An evergreen, West Indian tree 30 to 40 feet high, with oblong-lanceolate, coriaceous leaves 2 to 6 inches long and panicles of small whitish to dark-blue fruits nearly 1 inch long, with red or yelow persistent calyx bases.

90930. BARYXYLUM BRASILIENSE (L.) Pierre. Caesalpiniaceae.

A tree up to 80 feet high with bipinnate leaves of small leaflets and axillary or terminal racemes of small yellow flowers. The orange-colored wood is elastic, tough, and durable, and it takes a fine polish. The tree is native to Central America.

For previous introduction see 87499.

90931. POSOQUERIA MULTIFLORA Lem. Rubiaceae.

A small tree with broadly cordate leaves and terminal cymes of large tubular white very fragrant flowers. It is native to Brazil.

For previous introduction see 88132.

90932. RHIPSALIS CASSUTHA Gaertn. Cactaceae. **Mistletoe cactus.**

90894 to 90942—Continued.

An epiphytic cactus which hangs in large clusters up to 30 feet long, with weak round light-green stems less than a quarter of an inch in diameter. The small solitary creamy flowers are followed by white fruits about the size of mistletoe berries. It is native to Mexico and southern Brazil.

90933. RHYTIDOPHYLLUM TOMENTOSUM (L.) Mart. Gesneriaceae.

A small plant with oblong-lanceolate, serrate, woolly leaves and greenish-yellow tubular flowers in corymbs. It is native to Jamaica.

90934. SOLANUM JAMAICENSE Mill. Solanaceae.

A native Jamaican shrub 5 to 6 feet high with stout recurved thorns, oval, woolly, angular-sinuate leaves 6 inches long, and umbels of small yellow flowers followed by round saffron-colored fruits.

90935. SOLANUM MAMMOSUM L. Solanaceae.

An ornamental shrub 5 to 8 feet in height, native to tropical Asia, with thorny leaves and large yellow flowers. It bears a large round deep-yellow fruit about 3 inches in diameter, with five small fingerlike protuberances projecting from the side at the base. The fruit lasts for a long time, both on the plant and after being picked. The root and fruit are used medicinally. The tough pliant wood is much used in certain parts of India for making drums, and the young twigs yield a good fiber.

For previous introduction see 52385.

90936. RUELLIA MACROPHYLLA Vahl. (*Stemonacanthus macrophyllus* Nees). Acanthaceae.

An erect shrub with ovate-lanceolate leaves 3 to 5 inches long and axillary peduncles, each bearing a pair of tubular crimson flowers 1 to 2 inches long. It is native to the West Indies.

90937. TRICHILIA HIRTA L. (*T. spondioides* Jacq.). Meliaceae.

A shrub or tree up to 60 feet high, native to the West Indies and Mexico, with pinnately compound leaves of obliquely ovate glabrous leaflets and 11 to 21 panicles, 9 inches long, of greenish flowers.

For previous introduction see 88137.

90938 and 90939. UVARIA RUFA (Dunal) Blume. Annonaceae.

A much-branched shrub, native to Japan, with a stem 4 to 6 inches in diameter and alternate, elliptic-oblong, acute or obtuse leaves 2 to 5 inches long. The solitary flowers are purplish red and about 1 inch wide. The oblong kidney-shaped red fruits, about 2 inches long, are in bunches of 18 to 20, with scant white flesh which is juicy, aromatic, and subacid without a trace of sugar and contains many seeds.

For previous introduction see 81927.

90940. VERNONIA FALLAX Gleason. Asteraceae.

A sparingly branched, shrubby perennial 3 to 4 feet high with elliptical-oblong leaves 2 to 3 inches long, finely gray-tomentose beneath, and terminal recurved clusters of three to seven small heads of purplish flowers. It is native to Cuba.

90894 to 90942—Continued.

90941. ZAMIA PUMILA L. Cycadaceae.

A palmlike cycad with the trunk mostly underground. The compound leaves, 3 to 4 feet long, are made up of 20 to 50 coriaceous shining leaflets with entire margins except for a few teeth at the tip. The conelike fruits, 3 to 5 inches long, are covered with tomentose hexagonal scales, and the angled red seeds are 1 inch long. It is native to Cuba.

90942. ZANTHOXYLUM MARTINICENSE (Lam.) DC. Rutaceae.

A spiny tree up to 60 feet high, native to the West Indies, with compound leaves made up of oblong entire leaflets, small white flowers, and small fruits which open and show the bright black seeds.

90943. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Hamburg, Germany. Seeds purchased from R. Liefmann & Sons. Received January 6, 1931.

Silesian red clover, produced in the district of Schweidnitz, in western-central Silesia.

90944 and 90945. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received January 6, 1931.

90944. Brittany grown.

90945. Vendee grown.

90946 to 90973.

From Quedlinburg, Germany. Seeds purchased from Heinr. Mette. Received January 6, 1931.

90946. ACHIMENES sp. Gesneriaceae.

No. 10796. Mixed varieties.

90947. ALLIUM PULCHELLUM Don. Liliaceae. **Onion.**

No. 11002. An onion with narrow-linear leaves about 1 foot long and a rather dense umbel of bell-shaped, violet flowers. Native to Asia Minor.

90948 to 90950. ARISTOLOCHIA spp. Aristolochiaceae.

90948. ARISTOLOCHIA ELEGANS Masters. **Calicoflower.**

No. 11770. A perennial vine with long-stalked, broadly cordate leaves 2 to 3 inches across, and solitary flowers, which have no unpleasant odor, borne on the pendulous young wood. The flowers have a yellow-green tube 2 to 3 inches long, and the cordate-circular limb, 3 inches across, is purple and white blotched, white outside, with a yellow eye. It is native to Brazil.

90949. ARISTOLOCHIA FIMBRIATA Cham.

No. 11772. A native of Argentina with a weak, slender stem, not climbing; the leaves are cordate-reinform and very obtuse. The tube of the perianth is green, much curved, like a hunting horn, swollen at the base, expanding above into a large 1-sided limb which is greenish-brown outside and deep purple-brown inside, with yellow reticulations; the margin is beset with long succulent hairs, each tipped with a gland. The very singular structure and color of the long-fringed flowers render this species particularly worthy of cultivation under glass or in favorable situations in the open.

For previous introduction see 48657.

90950. ARISTOLOCHIA GRANDIFLORA Swartz. **Pelicanflower.**

No. 11774. A downy climbing shrub with cordate-acuminate leaves and strong-scented flowers, 20 inches across, which in bud resemble a pelican with its head thrown back as at rest. The expanded limb of the flower is cordate-ovate, wavy margined, purple blotched, and has a slender ciliated tail 3 feet or more long. It is native to tropical America.

90951. COLCHICUM AUTUMNALE L. Melanthiaceae.

No. 16696. *Meadow saffron.*

90952. DAHLIA ROSEA Cav. (*D. variabilis* Hort.). Asteraceae.

No. 17250. *Nana.* Mixed dwarf single dahlias.

90953. DICENTRA SPECTABILIS (L.) Lemaire (*Dielytra spectabilis* Don). Papaveraceae. **Bleedingheart.**

No. 18244. *Carminrosa.*

90954. ESCHSCHOLTZIA CALIFORNICA Cham. Papaveraceae.

No. 18517. *Canaliculata Mikado.* A California poppy with crimson-scarlet-orange fluted petals.

90955. FREESIA HYBRIDA Hort. Iridaceae.

No. 18672. *Ragioneri.*

90956. GESNERIA HYBRIDA Hort. Gesneriaceae.

No. 18818. Mixed varieties.

90957. HEDYCHIUM GARDNERIANUM Roscoe. Zinziberaceae. **India gingerlily.**

No. 19229. A lemon-flowered variety.

90958 and 90959. LACINARIA SPICATA (L.) Kuntze (*Liatris spicata* Willd.). Asteraceae. **Spike gayfeather.**

90958. No. 20620. Received as *Liatris callilepis.* A variety with purple-red flowers.

90959. No. 20622. *Purpurrosa.* A variety with purple flowers.

90960. OXALIS CORNICULATA ATROPURPUREA Planch. (*O. tropaeoloides* Vilm.). Oxalidaceae. **Nasturtium oxalis.**

No. 21910. A yellow-flowered form with dark-brown leaves.

90961. OXALIS VALDIVIENSIS Barn. Oxalidaceae. **Chilean oxalis.**

No. 21911. A Chilean oxalis with very short stems, clustered leaves, and close umbels on long stems of small yellow flowers with red veins.

90962 to 90973. TROPAEOLUM spp. Tropaeolaceae.

90962 to 90966. TROPAEOLUM PELTOPHORUM Benth. (*T. lobbianum* Veitch). **Shield nasturtium.**

90962. No. 25420. *Lobb's climbing;* yellowish white.

90946 to 90973—Continued.

90963. No. 25428. *Lobb's climbing;* a bright-scarlet variety with dark foliage.

90964. No. 25544. *Liliput, Little snow white.*

90965. No. 25516. *Triomphe* (d'Hyeres).

90966. No. 25541. *Othello.* A small variety with blackish-red flowers and dark foliage.

90967 to 90969. TROPAEOLUM MAJUS L. Common nasturtium.

90967. No. 25572. *Heinemanni.* A tall climbing plant with silky, bronze-chocolate flowers.

90968. No. 25580. A tall climbing variety with pale yellow flowers.

90969. No. 25606. Schultz's tall climbing variety with scarlet flowers and dark leaves.

90970 to 90973. TROPAEOLUM MINUS L. Bush nasturtium.

90970. No. 25634. *Aurora.* Tom Thumb, a dwarf variety with terra-cotta colored flowers.

90971. No. 25648. Tom Thumb, a dwarf variety with scarlet flowers and golden-yellow leaves.

90972. No. 25725. A dwarf variety with red flowers and variegated foliage.

90973. No. 25696. Tom Thumb, a dwarf variety with rose-colored flowers.

90974 to 90976.

From Greece. Seeds presented by Panos Th. Anaguostopoulos, Professor of Horticulture, College of Agriculture, Athens. Received January 6, 1931.

90974. DELPHINIUM STAPHISAGRIA L. Ranunculaceae. Larkspur.

A stout-stemmed perennial or biennial, soft-hairy throughout, 1 to 3 feet high. The leaves are palmately five to seven lobed, with the lobes sometimes three cleft. The light-blue flowers are in a dense simple or branched raceme. Native to the Mediterranean countries.

90975. DRACUNCULUS VULGARIS Schott. Araceae. Common dragon.

A tuberous perennial, native to Europe, which resembles the American Indian turnip, *Arisaema triphyllum,* with the leaves divided into 10 fingerlike segments from a bow-shaped base and a purple, wavy margined spathe.

90976. VERBASCUM UNDULATUM Lam. Scrophulariaceae.

A yellow-flowered biennial about 3 feet high, native to stony hills in southeastern Europe. The short-stemmed lower leaves are oblong spatulate, and the upper ones are ovate-cordate and clasping. The flowers, an inch across, are in a long interrupted raceme.

90977 to 90981. LILIUM spp. Liliaceae. Lily.

From India. Seeds purchased from G. Ghose & Co., Townend, Darjeeling. Received January 6, 1931.

90977 to 90981—Continued.

90977. LILIUM GIGANTEUM Wall. Giant lily.

A lily, native to the Himalayas, with bulbs which grow close to the surface in rich black soil, at altitudes between 7,500 and 9,000 feet, where the ground is covered with snow from November to April. The smooth hollow stems, 6 to 9 feet high, are sometimes used for musical pipes. The handsome cordate leaves, shining dark-green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large white fragrant flowers, often 12 to a raceme, the perianth tube is slightly greenish and the inner surface of the segments is tinged with deep purple.

For previous introduction see 80010.

90978. LILIUM LONGIFLORUM Thunb. Easter lily.

90979. LILIUM BAKERIANUM Coll. and Hemsl. (*L. lowii* Baker).

A herbaceous perennial with purple-tinged white bulbs, slender erect stems 3 feet high, scattered linear-lanceolate leaves, and one to six fragrant, nodding, bell-shaped, creamy white flowers 2 to 3 inches across, spotted red-brown on the inside. Native to Burma and western China.

90980. LILIUM NEPALENSE D. Don.

A showy lily, native to the central Himalayas, with a slender erect stem 2 to 3 feet long, leafy to the inflorescence. The glossy bright-green leaves, 4 to 6 inches in length, are oblong-lanceolate and five ribbed. The flowers, 4 to 5 inches long, are greenish yellow outside and yellow within and flushed, except in the upper third, with purplish black; the oblanceolate segments are reflexed only in the upper half. The purplish-black filaments bear yellow anthers nearly an inch long. The plant was first discovered in the high mountains of Nepal.

90981. LILIUM POLYPHYLLUM D. Don.

A lily with a white, pink-tinged, stoloniferous bulb, a green stem 4 to 5 feet high, and fairly numerous scattered linear to oblong-lanceolate leaves 2 to 8 inches long. The fragrant nodding flowers, 2 to 12 in a lax umbel, are dull yellowish green outside, marble white, spotted and streaked with purple within, and are 2 to 3 inches across. It is native to the western Himalayas between 6,000 and 12,000 feet altitude.

90982 to 90992.

From Manchuria. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 7, 1931.

Scions of the best varieties grown in this region, presented by the Agricultural Experiment Station of the Kwantung Government, Chinchou (Kinshu), Manchuria.

90982 to 90985. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

90982. No. 7478. *Daisan kori.*

90983. No. 7479. *Bakuori.*

90984. No. 7480. *Dairibai.*

90985. No. 7482. *Shinri.*

90986. PYRUS sp. Malaceae. Pear.

No. 7484. *Auri* or *kamonashi.* Duckbeak pear.

90982 to 90992—Continued.

90987. PYRUS sp. Malaceae. **Pear.**

No. 7486. *Kouri* or *beninashi.* Red pear.

90988 to 90992. VITIS VINIFERA L. Vitaceae. **European grape.**

90988. No. 7481. *Gyunai.*

90989. No. 7483. *Shidenso.*

90990. No. 7485. *Murasaki budo.*

90991. No. 7487. *Hakkeishin.*

90992. No. 7488. *Yen shin.*

90993 to 91009.

From China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 7, 1931.

Nos. 90993 to 91000 were collected at the Fa Hua Ssu Temple, November 18, 1930.

90993. ASTER sp. Asteraceae.

No. 7463. A wild aster with light-lavender flowers.

90994. ASTER sp. Asteraceae.

No. 7464. A wild aster with yellow center.

90995. CHRYSANTHEMUM MORIFOLIUM (Ramat) Hemsl. Asteraceae. **Mulberry chrysanthemum.**

No. 7466. A wild pink-flowered chrysanthemum.

90996 to 91000. LESPEDEZA spp. Fabaceae. **Bushclover.**

90996. LESPEDEZA sp.

No. 7461. A small-leafed variety with purple pea-shaped flowers. Collected in a mountainous region in decomposed granitic soil.

90997. LESPEDEZA sp.

No. 7462. Said to have large leaves and white flowers.

90998. LESPEDEZA sp.

No. 7467. Closely related to *L. bicolor,* but this form has small pea-shaped pods, and the flowers are larger and more attractive than those of *L. bicolor.*

90999. LESPEDEZA sp.

No. 7468. This is perhaps the true *L. bicolor.* The seed pods are quite different from No. 7467 [90998], which is by far the better ornamental.

91000. LESPEDEZA sp.

No. 7469. Reported to come from plants bearing interesting white pea-shaped flowers with purple centers during the summer and early fall.

Nos. 91001 to 91007 were collected in the foothills near Hsianglang, 25 miles north of Peiping, Chihli Province, November 21, 1930.

91001. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

No. 7472.

91002. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 7474. Glossy mung beans.

90993 to 91009—Continued.

91003 to 91005. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

91003. No. 7473. A strain with yellow seeds.

91004. No. 7475. Green seeds with a yellowish cast.

91005. No. 7477. A common variety with black seeds.

91006 and 91007. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

91006. No. 7471. A brown-eyed cowpea, a variety commonly grown in this region.

91007. No. 7476. A pink cowpea, a commonly grown variety.

Nos. 91008 and 91009 were collected at the Fa Hua Ssu Temple, November 18, 1930.

91008. COTYLEDON FIMBRIATA RAMOSISSIMA Maxim. Crassulaceae.

No. 7465. A small succulent 6 to 8 inches high, with a rosette of lanceolate leaves and a compound pyramidal raceme 6 inches long of rose-pink flowers. It is native to China.

91009. INDIGOFERA KIRILOWII Maxim. Fabaceae. **Kirilow indigo.**

No. 7470. A shrub 3 to 6 feet high, with compound leaves made up of 7 to 11 obovate or elliptic leaflets 1 inch long and dense racemes 6 inches long of rose-colored, pea-shaped flowers 1 inch long. It is native to China.

For previous introduction see 44285.

91010. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

From China. Seeds presented by Anna Carrere, landscape architect, through P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 7, 1931.

A tree sometimes 100 feet high, native to China, with the bark exfoliating in large scales, leaving white-colored areas which on old trees become chalky white.

For previous introduction see 79179.

91011. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

From England. Seeds purchased from Pattulle, Higgs & Co. (Ltd.), Orpington, Kent. Received January 16, 1931.

Wild white clover.

91012 to 91017. VITIS VINIFERA L. Vitaceae. **European grape.**

From England. Cuttings presented by Fred J. Chittenden, Director, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey. Received January 7, 1931.

91012. *Black Alicante.*

91013. *Duchess of Buccleugh.*

91014. *Duke of Buccleugh.*

91015. *Lady Downes.*

91016. *Mrs. Prince.*

91017. *Prince of Wales.*

91018. UAPACA KIRKIANA Muell. Arg. Euphorbiaceae.

From South Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda, Southern Rhodesia. Received January 7, 1931.

Majanji. An indigenous fruit of great value to the natives and which perhaps saves many lives in famine times. It is of delicious flavor and very healthful. The great drawback to its use by Europeans is that the seeds occupy so large a part of the bulk of the fruit. The tree grows about 20 feet high, often on rocky hillsides not well adapted for cultivation. The fruits are variable in shape and size, as well as in the size of seeds.

For previous introduction see 54769.

91019 to 91025. LACTUCA SATIVA L. Cichoriaceae. **Lettuce.**

From France. Seeds purchased from Vilmorin-Andrieux & Co., Paris. Received January 8, 1931.

91019. *Brown Batavian.*

91020. *Brown Percheronne.*

91021. *Curled Batavian.*

91022. *Long White Standing Cos.*

91023. *Large Whitestone Summer.*

91024. *Paris Batavian.*

91025. *Royal Summer.*

91026 to 91037. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From the Union of Soviet Socialist Republics. Seeds presented through the Institute of Applied Botany, Leningrad. Received January 8, 1931.

91026. No. 8. From Althausen.

91027. No. 22. From Althausen.

91028. No. 76. From Tamarkand district.

91029. No. 81. From the Government of Novgorod.

91030. No. 139. From the Government of Pskov.

91031. No. 172. From the Moscow Plant Breeding Station.

91032. No. 262. From Althausen.

91033. No. 279. From the Government of Saratov.

91034. No. 301. From northern Africa.

91035. No. 320. From Parnir.

91036. No. 343. From the mountains of Bokhara.

91037. No. 381. From the mountains of Bokhara.

91038 to 91041.

From Canada. Seeds presented by Prof. John Davidson, Department of Botany, University of British Columbia, Vancouver, B. C. Received January 10, 1931.

91038. ALLIUM GEYERI S. Wats. Liliaceae. **Onion.**

A perennial with a fibrous-reticulated bulb, green leaves a foot high, and a scape 1 to 2 feet tall, bearing an umbel of rose-colored flowers one-third of an inch long. It is native to northwestern North America.

91038 to 91041—Continued.

91039. IRIS SETOSA Pall. Iridaceae. **Aretic iris.**

This was originally described as an Asiatic plant, but forms that can not be separated from it are found in North America. At least half a dozen forms come true from seed. The peculiarity of this iris is that the standards have dwindled until they are only small points about half an inch long, but their disappearance is usually counterbalanced by the increased size of the falls. The color is usually blue, but same shades are so light as to be almost gray.

For previous introduction see 67006.

91040. LILIUM PARVIFLORUM (Hook.) Holzinger. Liliaceae.

This lily, native to northwestern North America, closely resembles the leopard lily (*Lilium pardalinum*) but the flowers, of the same bright yellow with purplish spots, are smaller and are usually solitary or only two or three together.

For previous introduction see 78690.

91041. SOLANUM NIGRUM L. Solanaceae. **Black nightshade.**

For previous introduction see 35209.

91042 to 91044.

From Siam. Seeds presented by the director, Department of Agriculture, Ministry of Lands and Agriculture, Bangkok. Received January 10, 1931.

91042. DATURA METEL L. Solanaceae. **Hindu datura.**

A coarse pubescent annual 4 to 5 feet high, native to India, with heart-shaped, nearly entire leaves and large white flowers. The seeds are used as a narcotic.

91043. PHYSALIS PERUVIANA L. Solanaceae. **Peruvian groundcherry.**

A small shrub producing a very tasteful fruit which can be served in sirup.

For previous introduction see 82629.

91044. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

For previous introduction see 86394.

91045 to 91051.

From Irish Free State. Seeds purchased from Sir Josslyn Gore-Booth, Lissadell. Received January 10, 1931.

91045. ALLIUM MOLY L. Liliaceae. **Lily leek.**

A bulbous plant with broad glaucous leaves and scapes 10 to 15 inches high. The bright-yellow flowers are in compact heads. Native to southern Europe.

For previous introduction see 82014.

91046. ASTER sp. Asteraceae.

Nos. 6156 and 6159, Everest Expedition.

91047. IBERIS GARREXIANA All. Brassicaceae. **Candytuft.**

A dwarf, evergreen, slightly woody perennial 6 inches high with oblong glabrous leaves, narrowed at the base, and corymbose racemes of small white flowers. It is native to southern Europe.

91045 to 91051—Continued.

91048. MARGYRICARPUS SETOSUS Ruiz and Pav. Rosaceae.

A dwarf heathlike creeping evergreen shrub about 1 foot high, with odd-pinnate leaves, very small greenish flowers, and showy white berries which persist for some time. Native to Peru.

For previous introduction see 78360.

91049 to 91051. ROSCOEA spp. Zingiberaceae.

91049. ROSCOEA CAUTLEOIDES Gagn.

A very vigorous variety which flowers two months later, but is otherwise like the type.

For previous introduction see 81986.

91050. ROSCOEA HUMEANA Balf. and Smith.

A stout gingerlike perennial about 8 inches high, with cigar-shaped rhizomes, four to six broadly lanceolate sessile leaves 4 to 8 inches long, and four to eight large violet-purple flowers in a terminal spike. It is native to Yunnan, southwestern China, and has flowered freely at Kew, England, where it is considered the finest of the genus and where, likewise, it appears entirely hardy.

For previous introduction see 81987.

91051. ROSCOEA PURPUREA J. E. Smith.

Variety *capitata*. A thick-rooted perennial gingerlike Himalayan plant about 1 foot high with sessile lanceolate leaves and purple, rarely pale lilac or white flowers in a sessile spike.

For previous introduction see 82396.

91052. CARICA PAPAYA L. Papayaceae. **Papaya.**

From Brazil. Seeds presented by P. H. Rolfs, Consultor Technico de Agricultura do Estado de Minas Geraes, Escola Superior de Agricultura e Veterinaria, Vicosa, Minas Geraes. Received January 10, 1931.

From Bella Horizonte. A locally grown variety of excellent flavor with a fruit which weighed over 8 pounds. It belongs to the same group of papaya as those that were cultivated extensively around Miami and other parts of Florida. The altitude of Belle Horizonte is sufficient to put it at the frost line.

91053. NICOTIANA TABACUM L. Solanaceae. **Tobacco.**

From Buin, island of Bougainville. Seeds obtained through Alfred Rehder, Arnold Arboretum, Jamaica Plain, Mass. Received January 12, 1931.

No. 2312. Collected by Frank Kajewski. A native tobacco which has been cultivated for about a century in the Solomon Islands.

91054 to 91059. (Undetermined.)

From South America. Terrestrial orchid cuttings presented by W. A. Archer, Medellin, Colombia. Received January 12, 1931.

91054. **91057.**

91055. **91058.**

91056. **91059.**

91060 to 91181.

From Manchuria and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 14, 1931.

Nos. 91060 to 91064 were received from Kungtsi, a grain merchant at Kaiynan, Manchuria, December 4, 1930.

91060. CANNABIS SATIVA L. Moraceae. **Hemp.**

No. 6642. *Shaomatzu.* A native variety.

91061. PERILLA FRUTESCENS (L.) Britton. Menthaceae. **Green perilla.**

No. 6645. An annual Chinese herb, the seeds of which are used as bird feed and also to produce an oil used for waterproofing paper.

91062 to 91064. PHASEOLUS spp. Fabaceae.

91062. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adzuki bean.**

No. 6639. *Zaushaotou.* A medium-sized red bean, used for food.

91063. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 6640. *Liutou.* A small dark-green seed, used for making bean sprouts and bean vermicelli.

91064. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adzuki bean.**

No. 6641. *Zaushaotou.* A mixture of light-yellow and red varieties which are used for food.

91065 and 91066. PUERARIA THUNBERGIANA (Sieb. and Zucc.) Benth. Fabaceae. **Kudzu-bean.**

From Dairen, Manchuria. Purchased from Manshu Nosan Shokai (Inc.), seed growers, December 11, 1930. Kudzus which may prove to be hardier forms than the ones now grown in the United States.

91065. No. 6646. Collected in the mountain regions in Kwantung territory.

91066. No. 6647. Collected in the mountain regions of northeastern Chosen.

Nos. 91067 to 91070 were received from Kungtsi, a grain merchant at Kaiynan, Manchuria, December 4, 1930.

91067 and 91068. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

91067. No. 6638. *Hsifeng kauliang.* Used for food and also as cattle feed.

91068. No. 6643. *Kauhang.* Used for food and cattle feed.

91069. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 6637. *Pazu.* A medium-sized cowpea of whippoorwill type.

91070. ZEA MAYS L. Poaceae. **Corn.**

No. 6644. *Paomi.* A native variety, grown extensively in this district.

91071 to 91181. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 91071 to 91088 were received from Norborn Tajima, Agricultural Engineer, County Agricultural Society, Kosai, Chosen, November 24, 1930.

91060 to 91181—Continued.

91071. No. 6525. *Jinunikon.* A very small nearly round dark-brown bean which may be of value for sprouting.

91072. No. 6526. *Kagabikon.* A medium-large oval slightly flattened green bean with brown hilum and green germ.

91073. No. 6527. *Ajikarikon.* A medium-sized oval black bean marked with brown in concentric rings. Very similar to the *Meyer,* No. 17852.

91074. No. 6528. *Saita.* A very small nearly round yellow bean with pale hilum. It may have value for sprouts.

91075. No. 6529. *Atsuki daizu.* A medium-large oval green bean with pale hilum.

91076. No. 6530. *Kokuta.* A large black oval slightly flattened bean with yellow germ.

91077. No. 6531. *Sashokuta.* A medium-sized oval slightly flattened seal-brown bean with green germ.

91078. No. 6532. *Jinunikon.* A mixture of medium-small brown and black varieties.

91079. No. 6533. *Bankon.* A large oval slightly flattened black bean with yellow germ.

91080. No. 6534. *Chunurikon.* A mixture of brown and black seeded varieties.

91081. No. 6535. *Kantekon.* A medium-sized oval seal-brown bean with green germ.

91082. No. 6536. *Zomukon.* A medium-small oval slightly flattened yellow bean with brown hilum.

91083. No. 6537. *Seihita.* A medium-sized oval slightly flattened light-green bean with brown hilum.

91084. No. 6538. *Kagabikon.* A medium-large oval slightly flattened black bean marked with brown in concentric rings.

91085. No. 6539. *Heijo.* A medium-sized oval yellow bean with pale hilum.

91086. No. 6540. *Horabikon.* A large oval yellow bean with brown hilum.

91087. No. 6541. *Pakute.* A medium-sized oval slightly flattened bean with brown hilum.

91088. No. 6542. *Kurosaita.* A medium-small nearly round brown bean with yellow germ.

Nos. 91089 to 91181 are mixed samples of yellow-seeded varieties from Manchuria. Nos. 91089 to 91106 are from the South Manchurian Railway Experiment Station, Kungchuling, November 28, 1930. *Kungchuling.* A medium-large nearly round yellow seed with light-brown hilum.

91089 to 91094. First-prize seed from the Changchun district.

91089. No. 6543. 91092. No. 6546.
91090. No. 6544. 91093. No. 6547.
91091. No. 6545. 91094. No. 6548.

91060 to 91181—Continued.

91095 to 91100. First-prize seed from the Kungchuling district.

91095. No. 6549. 91098. No. 6552.
91096. No. 6550. 91099. No. 6553.
91097. No. 6551. 91100. No. 6554.

91101 to 91106. First-prize seed from the Ssupingkai district.

91101. No. 6555. 91104. No. 6558.
91102. No. 6556. 91105. No. 6559.
91103. No. 6557. 91106. No. 6560.

Nos. 91107 to 91123 are mixtures of yellow-seeded varieties from northern Manchuria. Received December 1, 1930.

91107. No. 6562. Collected at Mankou, a medium-sized bean.

91108. No. 6563. Collected at Anda, medium-small to medium-sized seeds.

91109. No. 6564. Collected at Tsiachiatun; medium-sized seeds.

91110. No. 6565. Collected at Taianchen; medium-sized oval beans with pale hilum.

91111. No. 6566. Collected at Sanchaho, medium-sized seed.

91112. No. 6567. Collected at Tachiakou, medium-sized seed.

91113. No. 6568. Collected at Yaomen.

91114. No. 6569. Collected at Sanchaho.

91115. No. 6570. Collected at Makou, medium-sized seed.

91116. No. 6571. Collected at Sungchang, medium-sized seed.

91117. No. 6572. Collected at Sunghuachiang, medium-sized seed.

91118. No. 6573. From Taolaichao, medium-sized beans.

91119. No. 6574. From Tuichingshan, small to medium-sized beans.

91120. No. 6575. Collected at Taolaichao.

91121. No. 6576. Collected at Shuangchenpu, medium-sized varieties.

91122. No. 6577. Collected at Shuangchenpu.

91123. No. 6578. Collected at Anda, medium to medium-large nearly round beans with pale hilum.

Nos. 91124 to 91181 were collected November 30, 1930.

91124. No. 6579. From Liangshihchiatzu. A native variety of medium-sized nearly round yellow beans; the color of the hilum varies from pale to brown; used for oil.

91125. No. 6580. From Palichiaotzu. Medium-small to medium-sized varieties, used for oil.

91126. No. 6581. From Huantoushantzu. A medium-small nearly round native variety with pale hilum.

91127. No. 6582. From Chungyangpu. A mixed sample of native varieties, medium small to medium sized.

91060 to 91181—Continued.

91128. No. 6583. From Tayushu. A mixture of native varieties varying from medium small to medium sized.

91129. No. 6584. From Chaoyangpo. A mixture of native varieties, used for oil.

91130. No. 6585. From Liangshihchiatzu. A mixture of yellow-seeded varieties, used for oil.

91131. No. 6586. From Huaitehhsien. A mixed sample of native varieties, used for oil.

91132. No. 6587. From Shihsanchiatzu. A mixed sample of native varieties, used for oil.

91133. No. 6588. From Santaokang. A medium-sized nearly round native variety with pale-brown hilum.

91134. No. 6589. From Taichiatun. A mixed sample of native varieties, used for oil.

91135. No. 6590. From Kaoshantun. A mixed sample of native varieties, used for oil.

91136. No. 6591. From Tayushu. A mixed sample of native varieties.

91137. No. 6592. From Chinchiatun. A medium-sized nearly round native variety with pale-brown hilum.

91138. No. 6593. From Huaitehhsien. A mixed sample of native varieties.

91139. No. 6594. From Shihchipu. A medium-large nearly round native variety with pale-brown hilum, very similar to the *Improved Kungchuling*.

91140. No. 6595. From Youtachuangtzu. A mixed sample of native varieties.

91141. No. 6596. From Shihtoutzu. A mixed sample of native varieties, used for oil.

91142. No. 6597. From Liufangtzu. A mixed sample of native varieties, used for oil.

91143. No. 6598. From Shantoukang. Medium-large nearly round beans with light-brown hilum; very similar to the variety *Kungchuling*.

91144. No. 6599. From Chingchiakang. A mixed sample of medium-sized nearly round varieties.

91145. No. 6600. From Tapingchuang. Medium-large nearly round beans with light-brown hilum; very similar to the variety *Kungchuling*.

91146. No. 6601. From Toutaokang. A mixed sample of native varieties.

91147. No. 6602. From Palichiaotzu. A medium-large nearly round yellow bean with light-brown hilum, very similar to the variety *Kungchuling*.

91148. No. 6603. From Heiliutzu. A mixed sample of native varieties.

91149. No. 6604. From Kuochiakang. A medium-sized nearly round variety with light-brown hilum.

91150. No. 6605. From Tayushu. A medium-small nearly round bean with light slate-colored hilum, somewhat similar to the *Wea* variety.

91060 to 91181—Continued.

91151. No. 6606. From Liufangtzu. A mixed sample of native varieties.

91152. No. 6607. From Wutaitzu. A mixed sample of native varieties.

91153. No. 6608. From Kaoshantun. Medium-sized nearly round beans with light-brown hilum.

91154. No. 6609. From Ssutaokang. A mixed sample of native varieties.

91155. No. 6610. From Shihsanchiatzu. A mixed sample.

Nos. 91156 to 91181 are from Kaiynan, December 4, 1930. Mixed samples of yellow-seeded varieties.

91156. No. 6611. Medium-small varieties, used for oil.

91157. No. 6612. Varieties used for oil.

91158. No. 6613. Medium-sized nearly round beans with pale hilum.

91159. No. 6614. Medium-small varieties.

91160. No. 6615. A mixed sample of medium-small varieties.

91161. No. 6616. A mixed sample.

91162. No. 6617. A mixed sample of medium-small varieties.

91163. No. 6618. Medium-small varieties.

91164. No. 6619.

91165. No. 6620. Medium-small varieties.

91166. No. 6621. Medium-small varieties.

91167. No. 6622. Medium-sized varieties.

91168. No. 6623. Medium-small varieties.

91169. No. 6624. Medium-sized varieties.

91170. No. 6625. Medium-small varieties.

91171. No. 6626. Medium-sized varieties.

91172. No. 6627. Medium-sized varieties.

91173. No. 6628. Medium-sized varieties.

91174. No. 6629. Seed originally from Changchungentou.

91175. No. 6630. Medium-sized varieties.

91176. No. 6631. Medium-sized nearly round beans with light-brown hilum. Seed originally from Kailian.

91177. No. 6632. Medium-sized nearly round varieties. Seed came originally from Hsifeng.

91178. No. 6633. Medium-small varieties which came originally from Fakumen.

91179. No. 6634. *Huangpaohsiu*. Medium-sized nearly round beans with pale hilum.

91180. No. 6635. Medium-sized varieties.

91181. No. 6636. *Kaiynan huangpao*. Medium-sized nearly round beans with very light-brown hilum.

91182 to 91197.

From China. Scions and seeds obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 16, 1931.

91182 to 91187. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

91182. From Chu Li Chi, village of Hseangtong. No. 7489. Scions of the Lantern persimmon. The fruits are about 2 inches long by 2 to 3 inches in diameter. This persimmon is of good color and attractive in appearance. The constriction is nearer the top than that of the Tamopan or Lange persimmon. The Lantern persimmon trees are usually stronger and more vigorous growers than the Tamopan and are usually girdled, as this variety has a tendency to produce vegetative growth at the expense of fruit; and the checking of this tendency by girdling is essential to the best fruit production.

Nos. 91183 to 91187 are scions collected at Kutang, near Hangchow.

91183. No. 7490. *Fire* persimmon. This is the second most important variety grown in this region. The attractive fruit, which ripens in September, is smooth without constriction and of rather deep-red color, measuring about 2 inches in thickness and over 2 inches in diameter. It is probably nonastringent when firm, as it is reported that they are not processed and that they are gone before frost.

91184. No. 7491. *Square* persimmon. This is the most important variety grown in this region. The fruit ripens in September and is a good-sized, smooth-skinned, red persimmon without constriction, 2 inches in thickness and nearly 3 inches in diameter. The color is not so deep a red as that of No. 7490 [91183], but the fruit is larger. It is reported that this persimmon is not processed and that its season is over before frost, therefore it may be nonastringent when quite firm.

91185. No. 7492. *High foot* persimmon. This is the third important persimmon grown in this region. The fruit ripens in September. This is a very fine large fruit, with smooth skin without constriction, and the color is somewhat redder than that of No. 7491 [91184], but not so deep a red as No. 7490 [91183]; it measures over 2 inches in thickness and over 3 inches in diameter. It is reported that the fruit is not processed and that the season is over before frost, therefore it is probably nonastringent when quite firm.

91186. No. 7493. The *Whitebark* persimmon, used as a stock on lowlands in this region and also used to some extent as a fresh fruit. The fruits, about 2 inches in thickness and over 2 inches in diameter, are a rather dull russet-yellow color and ripen in October. Growers in this region take the young plants from the mountain side when about 6 feet in height and 1 inch in diameter and plant them in their orchards. The second season, when

91182 to 91197—Continued.

the plant is about 2 inches in diameter, they are grafted apparently by what is known as the side-spur method.

91187. No. 7494. Scions of the *Whitebark* persimmon, taken from a different tree from those sent in under No. 7493 [91186].

91188. DIOSPYROS sp. Diospyraceae. **Persimmon.**

No. 7596. Supposed to be the *Whitebark* persimmon.

91189. LIGUSTRUM LUCIDUM Ait. Oleaceae. **Glossy privet.**

No. 7597. November 30, 1930. Collected along the road from Hangchow to Kutang. Trees up to 40 feet high, with light-colored bark. This seed was collected from a tree 20 feet high, which was in full leaf at this date.

91190. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

No. 7583. November 27, 1930. Obtained in Shanghai and said to be grown in that region.

91191. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 7498. November 27, 1930. *Green* bean. Glossy and dull-green beans from Shanghai.

91192. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 7584. November 28, 1930. Obtained in Shanghai; said to be native grown.

91193 to 91195. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Shanghai, seeds said to be locally grown.

91193. No. 7585. November 28, 1930. A black bean with green germ.

91194. No. 7586. November 27, 1930. A good-sized yellow bean.

91195. No. 7587. November 27, 1930. A large, dull-green, rather promising bean.

91196. VICIA FABA L. Fabaceae. **Broadbean.**

No. 7499. November 27, 1930. *Silkworm* bean. From Shanghai, said to be locally grown.

91197. CASTANEA HENRYI (Skan) Rehd. and Wils. Fagaceae. **Chestnut.**

No. 7497. November 30, 1930. From Hangchow. An edible chestnut, originally from Shaohsing, Chekiang Province. The tree becomes from 25 to 90 feet high, with oblong-lanceolate long-acuminate leaves, green on both sides. The burs are either solitary or two in a bunch, usually containing but one nut.

For previous introduction see 85723.

91198 to 91230.

From France. Plants purchased from F. Delaunay, Angers. Received January 16, 1931.

91198 to 91210. PYRUS spp. Malaceae. **Pear.**

91198. PYRUS sp.
Admiral Gervais.

91198 to 91230—Continued.

91199. PYRUS sp.

Alexandre Lambre.

91200. PYRUS sp.

Belle Guérandaise.

91201. PYRUS sp.

Beurré Six.

91202. PYRUS sp.

Charles Ernest.

91203. PYRUS sp.

Directeur Hardy.

91204. PYRUS sp.

Doyenné Georges Boucher.

91205. PYRUS sp.

Général Tottleben.

91206. PYRUS sp.

La France.

91207. PYRUS sp.

Nouveau Poiteau.

91208. PYRUS sp.

Petite Marguerite.

91209. PYRUS sp.

Président Barabe.

91210. PYRUS sp.

Soldat Laboureur.

91211 to 91230. CORYLUS spp. Betulaceae.

91211. CORYLUS AVELLANA L. **Filbert.**

Aveline d'Angleterre.

91212 and 91213. CORYLUS MAXIMA L. **Giant filbert.**

91212. *Aveline de Piémont.*

91213. *Aveline de Provence.*

91214 to 91230. CORYLUS AVELLANA L. **Filbert.**

91214. *Bard Espagnol.*

91215. *Belle de Guibilino.*

91216. *Commun à feuilles de Chêne.*

91217. *Commun à grappe.*

91218. *Commun à gros fruits striés.*

91219. *De Beyne.*

91220. *De Metz.*

91221. *Downton.*

91222. *Franc à fruits blanc.*

91223. *Franc rouge.*

91224. *Franc à gros fruits.*

91225. *Grosse longue d'Espagne.*

91226. *Grosse ronde.*

91227. *Longue Pointue.*

91228. *Précoce de Grugliasco.*

91229. *Prolific.*

91230. *Large Spanish.*

91231 to 91233. CORYLUS spp. Betulaceae.

From England. Scions presented by Dr. A. W. Hill, Director, Royal Botanic Gardens, Kew. Received January 17, 1931.

91231. CORYLUS CHINENSIS Franch. **Chinese hazelnut.**

The Chinese hazelnut is closely allied to the Turkish hazelnut (*Corylus colurna*), differing in leaf and stem characters. It becomes a tall tree, sometimes over 100 feet high, with heart-shaped leaves about 7 inches long. The nuts are borne in clusters of four to six. It is native to western China.

For previous introduction see 73502.

91232. CORYLUS COLURNA L. **Turkish hazelnut.**

A vigorous free-growing tree up to 60 feet in height, with stout, more or less horizontal branches, heart-shaped glossy green leaves 5 inches long, and small hard-shelled nuts inclosed in fleshy hairy green involucres.

For previous introduction see 86263.

91233. CORYLUS JACQUEMONTII Decaisne. **Hazelnut.**

A tree closely related to *C. colurna*, but the leaves are distinctly obovate and sharply serrate. It is native to the Himalayas.

91234. PYRUS USSURIENSIS OVOIDEA Rehder. Malaceae. **Ussurian pear.**

From Carmel, N. Y. Scions presented by Arthur Sullivant Hoffman. Received January 15, 1931.

A large handsome tree of pyramidal habit, eventually 50 feet high, with sharply serrate oval-oblong leaves 3 to 5 inches long. The large pure-white flowers, in few-flowered racemes, are borne in such profusion as to make this one of the handsomest of all the pears when in bloom. The deep-yellow ovoid fruits are about 1 inch long. In autumn the leaves turn brilliant scarlet. A native of northern China, this pear is perfectly hardy in the vicinity of Boston, Mass.

91235. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Manila, Philippine Islands. Seeds presented by Manuel L. Roxas, Director of Plant Industry. Received January 16, 1931.

Cagayan. Collected in Túguegarao, Cagayan. A local variety utilized for the production of pastries, cakes, and bread.

91236. CANAVALIA MARITIMA (Aubl.) Thouars. Fabaceae.

From island of Bougainville, Solomon Islands. Seeds presented by Alfred Rehder, Arnold Arboretum, Jamaica Plain, Mass. Received January 19, 1931.

A leguminous plant growing on the beach in very poor soil. It produces a good mat of foliage and may be useful for green manure in the warmer parts of the United States.

For previous introduction see 76916.

91237 to 91239.

From Pretoria, Union of South Africa. Seeds presented by I. B. Pole Evans, Chief, Division of Plant Industry, Department of Agriculture. Received January 20, 1931.

91237. POLLICHIA CAMPESTRIS Ait. Silenaceae.

A diffusely branched, subshrubby plant 1 to 2 feet high, with linear-lanceolate leaves half an inch long and minute inconspicuous flowers. It is native to South Africa and is of value as a cover crop.

91238. TETRAGONIA ARBUSCULA Fenzl. Aizoaceae.

A much-branched, semishrubby perennial, with fleshy leaves less than an inch long, varying from linear to ovate-oblong. The small inconspicuous flowers are borne in leafy racemes and are followed by 3-winged to 4-winged nutlike fruits. It is native to South Africa.

91239. SUTHERLANDIA FRUTESCENS (L.) R. Br. Fabaceae.

A leguminous shrub about 3 feet in height, with finely pinnate leaves and showy scarlet flowers produced in short axillary racemes. Native to the Mediterranean countries.

For previous introduction see 59297.

91240 to 91259.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. Received January 20, 1931.

91240 to 91244. ACER spp. Aceraceae. **Maple.**

91240. ACER CISSIFOLIUM (Sieb. and Zucc.) Koch.

A Japanese maple of compact, rounded habit becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches long. The minute flowers are produced in May with the leaves, and the keys, about 1 inch long, occur in long racemes. In autumn the foliage turns red and yellow.

For previous introduction see 85678.

91241. ACER MANDSHURICUM Maxim. **Manchurian maple.**

A hardy Manchurian maple which forms a shrub or small tree.

For previous introduction see 72401.

91242. ACER NIKOENSE (Miquel) Maxim.

A tree up to 50 feet high, native to Japan and central China, with attractive foliage which becomes brilliant red or purple in autumn.

For previous introduction see 77645.

91243. ACER RUFINERVE Sieb. and Zucc.

A tree up to 40 feet high, with striped bark, glaucous branchlets, 3-lobed, doubly serrate leaves 3 to 5 inches long, rusty tomentose on the veins beneath when young. The flowers are borne in upright, rusty pubescent racemes, and the wings of the fruits spread nearly at right angles. It is native to Japan.

91240 to 91259—Continued.

91244. ACER CAUDATUM UKURUNDUENSE (Trautv. and Meyer) Rehder.

A small Manchurian tree with coarsely toothed, 5-lobed or 7-lobed leaves.

For previous introduction see 71133.

91245 and 91246. RHODODENDRON RETICULATUM D. Don. Ericaceae. **Azalea.**

A much-branched deciduous Japanese shrub up to 25 feet high, belonging to the section Sciadorhodion. The branchlets are yellow-brown, the reticulate broadly ovate leaves, 2 to 3 inches long, are in clusters of two to three, and the slightly 2-lipped rotate-campanulate flowers are rose-purple to magenta. There are two forms—the ordinary form with 10 stamens, often called *R. rhombicum*, and a form with 5 stamens, called *R. dilatatum*.

For previous introduction see 85690.

91245. Received as *Azalea dilatata.*

91246. Received as *Azalea rhombica.*

91247. RHODODENDRON PENTAPHYLLUM Maxim. (*Azalea quinquefolia rosea* Rehd.). Ericaceae. **Fiveleaf azalea.**

A deciduous shrub of the section Rhodora, up to 20 feet high, with usually five elliptic-lanceolate leaves at the ends of the branches. The rose-pink flowers, 1 to 2 inches across, are solitary or in twos, appearing before or with the leaves, which turn orange to crimson in the autumn. It is native to Japan.

For previous introduction see 85688.

91248 to 91250. EURYA spp. Theaceae.

91248. EURYA EMARGINATA (Thunb.) Makino.

An evergreen shrub, native to Japan, with short-stemmed obovate emarginate leaves and axillary paired flowers, followed by black berries about an eighth of an inch in diameter.

91249. EURYA JAPONICA Thunb.

Variety *thunbergii.* Said to be a dwarf form with bright reddish-green leaves.

91250. EURYA OCHNACEA (DC.) Szysz.

A shrub or small tree with coriaceous oblanceolate to oblong leaves 3 to 5 inches long and usually solitary nodding white flowers 1 inch across, followed by berrylike black fruits a quarter of an inch in diameter. It is native to Japan.

91251. HEMIPTELEA DAVIDII (Hance) Planch. Ulmaceae. **David zelkova.**

A shrubby, spiny, elmlike tree, native to Chosen and northern China, which has merit as an ornamental tree because of its handsome dark-green foliage; the leaves are oval or oblong, deeply toothed, and about 2 inches long. Because of its spines, the tree may be useful for tall hedges.

For previous introduction see 67031.

91252 to 91255. ILEX spp. Aquifoliaceae. **Holly.**

91252. ILEX FUJISANENSIS Hort.

A place of publication for this name has not been found, but a trade catalogue describes it as an evergreen tree

91240 to 91259—Continued.

20 feet high, with glossy leathery leaves like those of *Andromeda japonica*, and the numerous red berries are borne on long stems. It is native to Mount Fuji, Japan, at an altitude of 3,000 feet.

91253. ILEX INTEGRA Thunb.

An evergreen Japanese shrub or tree, up to 40 feet high, with oval or oblong, usually entire leaves 2 to 3 inches long, and globular or ovoid red berries.

For previous introduction see 67361.

91254. ILEX PURPUREA Hassk. (*I. oldhami* Miquel).

An evergreen tree with crenate-serrulate, elliptic-lanceolate leaves 2 to 3 inches long and red berries, half an inch long, in clusters of two to five. It is native to Japan and central China.

For previous introduction see 80095.

91255. ILEX SUGEROKI Maxim.

A dense evergreen shrub 6 feet high, with pubescent branchlets, elliptic, acute leaves 1 to 2 inches long, serrate above the middle, and solitary fruits, about one-third of an inch in diameter, on pedicels 1 inch long. It is native to Japan.

91256. LESPEDEZA DAURICA (Laxm.) Schindler. Fabaceae. **Bushclover.**

A tall plant with white, pealike flowers.

For previous introduction see 65493.

91257. IRIS ROSSII Baker. Iridaceae.

An Apogon iris with a creeping rhizome, linear green grasslike leaves 4 to 6 inches long, and a very short stem with a single lilac flower an inch across. It is native to Chosen and northern China.

91258. LILIUM CORDIFOLIUM Thunb. Liliaceae. **Lily.**

A Japanese lily, 3 to 4 feet high, with pendulous leaves 12 to 18 inches long and wide, and a raceme of 4 to 10 fragrant white flowers often 6 inches long.

For previous introduction see 85683.

91259. MICHELIA COMPRESSA (Maxim.) Sarg. Magnoliaceae.

A tree up to 40 feet high, with oblong to obovate coriaceous leaves 3 to 4 inches long, and fragrant yellow flowers 1 inch across. It is native to Japan.

91260 and 91261. LILIUM spp. Liliaceae. **Lily.**

From England. Seeds purchased from W. A. Constable, Paddock Wood, Kent. Received January 21, 1931.

91260. LILIUM MARTAGON L. **Martagon lily.**

Variety *Cattaneae*. A form with stems 6 to 7 feet high, five to seven whorls of leaves, flower buds covered with cottony down, and the rich-purple flowers only slightly spotted.

91261. LILIUM PHILIPPINENSE FORMOSANUM (Baker) Wilson.

Price's variety. A dwarf alpine form which is said to be hardy in England.

91262 and 91263.

From Japan. Seeds presented by Prof. Mitsunaga Fujioka, Division of Forestry, College of Agriculture, Imperial University, Tokyo. Received January 21, 1931.

91262. LARIX LEPTOLEPIS (Sieb. and Zucc.) Gord. (*L. kaempferi* Sarg., not Carr.). Pinaceae. **Japanese larch.**

A deciduous tree up to 80 feet high, with short horizontal branches and yellowish or reddish-brown branchlets. The soft rather broad obtuse leaves are less than 2 inches long and are bluish green, and the obovate-oblong cones are 2 inches long. It is native to Japan.

91263. THUJOPSIS DOLABRATA (L. f.) Sieb. and Zucc. Pinaceae. **False-arborvitae.**

A pyramidal Japanese conifer 50 feet high, with spreading frondlike branchlets, nodding at the ends, small glossy dark-green leaves having white patches below and broadly ovoid cones less than 1 inch long. The wood is very resistant to decay and makes excellent poles and ties. This variety seeds but rarely, perhaps having only one good crop in 13 years.

For previous introduction see 78397.

91264 to 91272.

From Mexico. Seeds and tubers collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received January 23, 1931.

Nos. 91264 to 91268 were collected at Chapala, Jalisco, January 3, 1931, at 5,000 feet altitude.

91264. ALBIZZIA sp. Mimosaceae.

No. 1. An ornamental leguminous shrub, 8 feet high, with attractive deep-red flowers; found growing abundantly in arid rocky soil.

91265. (Undetermined.)

No. 10. A rather common herbaceous vine with milky juice, found on dry barren hillsides.

91266. CARDIOSPERMUM sp. Sapindaceae.

No. 2. A woody vine with papery capsules, found occasionally in arid rocky soil.

91267. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

A close relative of the kapok tree (*Ceiba pentandra*). It is a large or medium-sized tree with a spiny trunk, compound leaves, and hard, oblong fruits about 7 inches long, which contain whitish down, used for stuffing pillows and life preservers and for making candlewicks. It is native to western and southern Mexico.

For previous introduction see 78244.

No. 3. Seeds harvested by the natives in October, when they were ripe, from trees growing on rocky open hillsides with southern exposure.

No. 4. Seeds from a few stray fruits left by natives.

91268. (Undetermined.)

No. 9. A herbaceous vine found on a dry barren hillside; the edible ovate fruit, 6 inches long, is orange red and marked with longitudinal rows of yellow spots.

91264 to 91272—Continued.

Nos. 91269 to 91271 were collected at El Desierto, Distrito Federal, December 26, 1930, at 10,000 feet altitude.

91269. SALVIA sp. Menthaceae. **Sage.**

No. 5. An ornamental herb, 3 to 5 feet high, found abundantly in semi-shaded situations under cedar and Douglas fir trees. The large flowers are deep red.

91270. SOLANUM sp. Solanaceae.

No. 6. Tubers of a herbaceous vine 3 feet long with green berrylike fruits three-quarters of an inch in diameter, with one small tuber to each plant. Found under cedar and fir trees.

91271. SOLANUM sp. Solanaceae.

No. 6a. Seeds collected from the same plants as No. 6 [91270].

91272. (Undetermined.)

No. 11. From a private garden in Guadalajara, Jalisco, January 4, 1931, at an altitude of 5,000 feet. A tree with milky juice and fruit in pairs.

91273. SMITHIA SENSITIVA Ait. Fabaceae.

From Mandalay, Burma. Seeds presented by the Director of Agriculture, Burma. Received January 23, 1931.

An annual plant 2 to 3 feet high with slender much-branched stems, compound leaves made up of 4 to 20 leaflets half an inch long, and simple racemes of small yellow flowers. It is native to India. Of possible value as a forage crop or for green manure.

91274 to 91289.

From England. Seeds purchased from Clarence Elliott, Six Hills Nurseries, Stevenage, Herts. Received January 23, 1931.

91274 to 91277. ALLIUM spp. Liliaceae. **Onion.**

91274. ALLIUM CYANEUM Regel.

A rather dwarf plant, less than a foot high, with small pendulous heads of pale-blue flowers. Native to northern China.

For previous introduction see 82386.

91275. ALLIUM MACRANTHUM Baker.

A handsome herbaceous perennial from the eastern Himalayas. The flat leaves are over 1 foot long, and the mauve-purple flowers are produced in clusters of 50 or more on scapes 2 feet high.

For previous introduction see 78984.

91276. ALLIUM SIKKIMENSE Baker.

A neat little compact perennial 6 inches high or more, with grasslike leaves and loose umbels of deep-blue flowers. Native to Sikkim, India.

For previous introduction see 66534.

91277. ALLIUM sp.

An onion, native to Tibet.

91274 to 91289—Continued.

91278. ANEMONE NARCISSIFOLIA L. (*A. narcissiflora* L.). Ranunculaceae.

A stout erect herbaceous perennial with petioled 3-parted to 5-parted deeply cut basal leaves, sessile involucral leaves, and an umbel of several white flowers 1 inch across, with yellow anthers. It is native to Europe.

91279. BELLIUM MINUTUM L. Asteraceae.

A dwarf annual, scarcely 1 inch high, with ovate-spatulate radical leaves and white flowers in small heads. Native to southeastern Europe.

91280. CYCLAMEN NEAPOLITANUM Tenore. Primulaceae. **Neapolitan cyclamen.**

A low perennial 3 inches high, with handsomely marked heart-shaped leaves arising from a large black tuber. The deep pink or rarely white flowers are borne in autumn. Native to Italy.

For previous introduction see 79055.

91281. GYPSOPHILA ELEGANS Bieb. Silenaceae. **Common gypsophilia.**

Carmineus.

91282. HYACINTHUS AMETHYSTINUS L. Liliaceae. **Hyacinth.**

A slender graceful Spanish hyacinth with short racemes of light-blue flowers 6 inches or less high.

For previous introduction see 66574.

91283. KNIPHOFIA HYBRIDA Hort. Liliaceae. **Torchlily.**

New hybrids.

91284. LEONTOPODIUM ALPINUM Cass. Asteraceae. **Common edelweiss.**

A low tufted woolly perennial herb with creeping stolons, lanceolate leaves, and heads of seven to nine small flowers surrounded by a starlike cluster of white woolly bracts. It is native to the Alps of Europe.

91285. OSTROWSKIA MAGNIFICA Regel. Campanulaceae. **Giant bellflower.**

A tall erect glabrous herbaceous perennial, 4 to 6 feet high, with ovate toothed leaves 4 to 6 inches long, in whorls of four or five, and pale-lilac, broadly bell-shaped flowers 2 inches long and 4 inches across the mouth. It is native to central Asia.

91286. LUPINUS HYBRIDUS Hort. Fabaceae. **Lupine.**

New hybrids.

91287. PORTULACA GRANDIFLORA Hook. Portulacaceae. **Common portulaca.**

A slender, terete, prostrate or ascending annual, or perennial under glass, 6 to 12 inches high, with short terete leaves and flowers 1 inch across in many bright colors. It is native to Brazil.

91288. DIERAMA PULCHERRIMA (Hook. f.) Baker (*Sparaxis pulcherrima* Hook. f.). Iridaceae.

A bulbous perennial native to South Africa, with irislike leaves, a remotely branched stem 4 to 6 feet high, and tubular, blood-purple, pendulous flowers 1 to 2 inches long.

91274 to 91289—Continued.

91289. THALICTRUM DIPTEROCARPUM Franch. Ranunculaceae. **Yunnan meadowrue.**

An erect perennial Chinese herb with large rose-colored flowers and pale-green leaflets, glaucous below.

For previous introduction see 53111.

91290. MAGNOLIA SCHIEDEANA Schlecht. Magnoliaceae.

From Mexico. Plant and cuttings collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received January 24, 1931.

No. 22. Collected near the Los Promontorias mine, near Alamos, Sonora, at 3,000 feet altitude. A large evergreen tree up to 45 feet high, native to Mexico, with finely reticulated, oval to elliptical leaves 5 to 8 inches long and creamy white flowers 4 to 6 inches across.

91291. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Algeria. Seeds presented by the Gouvernement Général de l'Algérie. Received January 24, 1931.

A variety from Jamacine, near Fougouit.

91292. ROSA ODORATA GIGANTEA (Collett) Rehd. and Wils. Rosaceae. **Giant tea rose.**

From Calcutta, India. Seeds presented by the superintendent of the Royal Botanic Gardens, Sibpur, near Calcutta. Received January 24, 1931.

A strong climbing, evergreen rose, native to Burma, with creamy white single flowers 4 to 6 inches across. It resembles the Cherokee rose, but is hardy only in the far south.

For previous introduction see 77272.

91293 to 91295.

From Gladwyne, Pa. Plants presented by Mrs. J. Norman Henry. Received January 26, 1931.

91293. SPIRAEA MOLLIFOLIA Rehder. Rosaceae. **Spirea.**

A shrub 6 to 8 feet high with arching, strongly angled branches and purplish, pubescent branchlets. The ovate to oblong leaves, 1 inch long, are slightly toothed near the apex and silky pubescent on both sides. The small white flowers are in pubescent umbels 1 inch across. It is native to western China.

91294. PRATIA ANGULATA (Forst f.) Hook. f. Campanulaceae.

A slender creeping herbaceous perennial forming broad matted patches. The stems are 2 to 7 inches long, the rather fleshy ovate to orbicular leaves less than half an inch long are sinuate-dentate, and the axillary flowers, less than 1 inch long, are white with purple streaks. It is native to New Zealand.

91295. PAROCHETUS COMMUNIS Buch.-Ham. Fabaceae. **Shamrock-pea.**

A half-hardy perennial trailing vine with shamrocklike leaves, each leaflet marked at the base with a brown crescent. The pea-shaped flowers, nearly 1 inch across, have cobalt-blue standards and pink wings. It is native to tropical Asia.

91296. BETA VULGARIS L. Chenopodiaceae. **Sugar beet.**

From Praha, Czechoslovakia. Seeds presented by J. Zapotil. Received January 26, 1931.

Zapotil-original.

91297 and 91298.

From Juan Fernandez Island. Seeds presented by Señor René Durand, through Waldo L. Schmitt, Curator of Marine Invertebrates, Smithsonian Institution, Washington, D. C. Received January 28, 1931.

91297. JUANIA AUSTRALIS (Mart.) Drude. Phoenicaceae. **Palm.**

A pinnate-leaved palm of moderate size, native to Juan Fernandez Island. The leaves are 4 to 5 feet long, with linear-acuminate pinnae, and the slender trunk is unarmed.

91298. DENDROSERIS LITORALIS Skottsb. Cichoriaceae.

A treelike plant 4 to 7 feet high, with large feathery dark-green broadly oval leaves up to 10 inches long and saffron-yellow flowers in terminal heads 2 inches across. Native to Juan Fernandez Island.

91299 and 91300. LILIUM spp. Liliaceae. **Lily.**

From England. Seeds purchased from Watkins & Simpson (Ltd.), London. Received January 28, 1931.

91299. LILIUM MONADELPHUM Bieb. (*L. szowitzianum* Fisch. and Lallem.). **Great Caucasian lily.**

A variety with reddish-brown anthers and lemon-yellow flowers, which are large and thickly purple dotted.

For previous introduction see 75734.

91300. LILIUM PHILIPPINENSE FORMOSANUM (Baker) Wilson.

A form of the Benquet lily native to Taiwan, characterized by long narrow leaves and vinous purple-tinged flowers.

For previous introduction see 90527.

91301 and 91302.

From Tahiti, Society Islands. Seeds presented by Harrison W. Smith. Received January 28, 1931.

91301. MUNTINGIA CALABURA L. Elaeocarpaceae.

A tropical American tree with a spreading crown, pinnate leaves, and small white flowers. The small yellow berries make good tarts or jam, and the leaves are used for tea.

For previous introduction see 67936.

91302. SICANA ODORIFERA (Vell.) Naud. Cucurbitaceae. **Casabanana.**

A subtropical ornamental cucurbitaceous vine producing large fruits a foot or more long which are edible but insipid.

For previous introduction see 80701.

91303 and 91304. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Japan. Seeds presented by Y. Kakizaki, Saitama Agricultural Station, Urawa, Saitama. Received January 29, 1931.

91303 and 91304—Continued.

Eggplant hybrids, produced at the station.

91303. *Kintyaku* × *Sinkuro.*

91304. *Sironasu* × *Sinkuro.*

91305 to 91315. RIBES RECLINATUM L. Grossulariaceae. **European gooseberry.**

From England. Plants purchased from George Bunyard & Co., Maidstone. Received January 29, 1931.

91305. *Bobby.*

91306. *Careless.*

91307. *Green ocean.*

91308. *Keepsake.*

91309. *Lancashire Lad.*

91310. *Lancer.*

91311. *Langley Beauty.*

91312. *Langley Gage.*

91313. *Leveller.*

91314. *Lord Derby.*

91315. *Sandwich Yellow.*

91316 to 91353.

From China. Seeds and cuttings collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 29, 1931.

91316. CASTANEA HENRYI (Skan.) Rehd. and Wils. Fagaceae. **Chestnut.**

No. 7637.

For previous introduction and description see 91197.

91317. POPULUS sp. Salicaceae. **Poplar.**

No. 7623. Scions of a white-barked poplar collected between Tangshan and Hsiangtang. The tree was 12 inches in diameter and 75 feet tall, with small leaves.

Nos. 91318 to 91353 were collected in Hopei Province.

91318. ALLIUM sp. Liliaceae.

No. 7630. From Peiping, December 27, 1930. *Chin tsai,* the Chinese leek, is a winter vegetable 1 inch in diameter and 18 to 24 inches long, commonly used in Peiping.

91319. AVENA NUDA Hoejer. Poaceae. **Naked oats.**

No. 7602. From Kalgan, December 15, 1930. Procured from a grain dealer. This is the common variety grown in these cold regions.

91320. BRASSICA PEKINENSIS (Lour.) Gagn. Brassicaceae. **Petsai cabbage.**

No. 7625. *Ching pai kon pai tsai* (Chinese white cabbage), from Peiping, December 27, 1930.

91321. CORIANDRUM SATIVUM L. Apiaceae. **Coriander.**

No. 7626. *Hsiang tsai* (fragrant vegetable). From Peiping, December 27, 1930. A vegetable used extensively both in China and Japan as a condiment for soups.

91316 to 91353—Continued.

91322. DAUCUS CAROTA L. Apiaceae. **Carrot.**

No. 7624. *Hung la pu* (red carrot). From Peiping, December 27, 1930. An attractive red carrot, purchased from a dealer.

91323. DIOSPYROS LOTUS L. Diospyraceae. **Dateplum.**

No. 7500. From Hsiangtang, 25 miles north of Peiping, December 25, 1930. Seed of the Chinese wild persimmon or black date, collected in the foothills. The Chinese use this tree as a stock on which to graft their large-sized persimmons.

91324. FAGOPYRUM ESCULENTUM Moench. Polygonaceae. **Buckwheat.**

No. 7601. Purchased from a dealer at Kalgan, December 15, 1930, but grown farther north.

91325. LACTUCA SATIVA L. Cichoriaceae. **Asparagus lettuce.**

No. 7627. *Wo sun* (root lettuce), purchased from a dealer in Peiping, December 27, 1930. The stalk, 1 to 2 inches thick and 8 to 12 inches long, is the part eaten. It is peeled, boiled until tender, and served with a cream sauce. The stalk has a slightly greenish color and much resembles the chayote, and could no doubt be used in similar ways. This is a good vegetable and well worth a trial.

91326. LINUM USITATISSIMUM L. Linaceae. **Flax.**

No. 7598. Purchased in Kalgan, December 15, 1930, but said to have been grown in Japan.

91327 and 91328. PISUM SATIVUM L. Fabaceae. **Pea.**

Locally grown seeds purchased from a dealer at Kalgan, December 15, 1930.

91327. No. 7603. A mixed sample of smooth and wrinkled green, white, and tan seeds.

91328. No. 7622. Rather small seed.

91329 and 91330. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

From Peiping, December 27, 1930.

91329. No. 7631. *Hsin li mei lo pu* (inside beautiful). A green radish extensively used by the Chinese and usually eaten raw.

91330. No. 7632. *Ching tsui po pu* (green radish), also known as brittle radish. It is eaten raw and is very popular, especially among the poorer people.

91331. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

No. 7633. *Po tsai* (Chinese spinach). From Peiping, December 27, 1930.

91332. VICIA FABA L. Fabaceae. **Broadbean.**

No. 7600. Purchased at Kalgan, December 15, 1930. A pinkish bean of good size.

91333. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 7617. Purchased at Kalgan, December 15, 1930. A reddish-brown cowpea, said to be locally grown.

91316 to 91353—Continued.

91334 to 91339. PHASEOLUS spp. Fabaceae. **Bean.**

Purchased at Kalgan, December 15, 1930. Said to be grown locally.

91334 and 91335. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adzuki bean.**

91334. No. 7605. A mixed sample of yellowish-brown and green beans.

91335. No. 7616. Gray beans.

91336 and 91337. PHASEOLUS AUREUS Roxb. **Mung bean.**

91336. No. 7614. A glossy bean.

91337. No. 7615. A green glossy bean.

91338 and 91339. PHASEOLUS VULGARIS L. **Common bean.**

91338. No. 7604. A white garden bean.

91339. No. 7606. A good-sized red garden bean.

91340 to 91350. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Kalgan, December 15, 1930. Locally grown seed purchased from a grain dealer.

91340. No. 7599. A rather light-green bean with yellow germ and conspicuous hilum.

91341. No. 7607. A green bean with green germ and conspicuous hilum.

91342. No. 7608. A rather small, more or less flattened black bean with yellow germ.

91343. No. 7609. A rather small oblong yellow bean with prominent dark-brown to black hilum.

91344. No. 7611. An oblong yellow bean with a moderately conspicuous hilum and yellow germ.

91345. No. 7612. Yellowish-green bean, more or less oblong, with a conspicuous dark-brown hilum and yellow germ.

91346. No. 7618. A green bean with black hilum and green germ.

91347. No. 7619. Rather small oval green beans with a dark-brown to black hilum and green germ.

91348. No. 7620. A good-sized oval yellow bean with a prominent brown to black hilum.

91349. No. 7621. A small black bean, more or less flattened, with a yellow germ.

91350. No. 7610. Purchased with those under No. 7609 [91343] from which were selected these brownish-green rather oblong beans.

91351. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

No. 7613. Purchased at Kalgan, December 15, 1930. A small yellowish-brown bean, said to be locally grown.

91352. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 7628. *Hsiao wan tou* (small white early field pea). From Peiping, December 27, 1930. A good-looking small-sized early garden pea.

91316 to 91353—Continued.

91353. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

No. 7629. *Ta pi hung tsui* (large red-skinned radish), obtained at Peiping, December 27, 1930. A winter radish which is much used with other vegetables in Peiping.

91354. (Undetermined.)

From Mount Silinda, Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson. Received January 29, 1931.

A tropical tree 1 foot in diameter and 50 feet high, with small pear-shaped fruits which usually contain two seeds. The flesh is aromatic, but the natives are not known to use it as food.

91355 to 91367.

From Quetta, India. Seeds purchased from the Quetta Fruit Agency. Received January 29, 1931.

91355. AMYGDALUS DAVIDIANA (Carr.) Zabel (*Prunus davidiana* Franch.). Amygdalaceae. **Chinese wild peach.**

The best variety; a very large peach.

91356 to 91360. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

91356. [No data.]

91357. [No data.]

91358. A white melon striped with black.

91359. *Dhaddhai* variety.

91360. White.

91361 to 91363. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

91361. *Duki* variety.

91362. Assorted *Quetta* varieties.

91363. Assorted *Sardos* varieties.

91364 to 91367. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

91364. *Charmaghy white.*

91365. *Chighali.*

91366. A strain with sweet white fruits.

91367. A variety with sweet fruits.

91368 to 91378. AGROPYRON spp. Poaceae.

From Saskatchewan, Canada. Seeds presented by Prof. L. E. Kirk, University of Saskatchewan, Saskatoon. Received January 30, 1931.

91368 to 91372. AGROPYRON TENERUM Vasey. **Slender wheatgrass.**

91368. Strain No. 9.

91369. Strain No. 10.

91370. Strain No. 11.

91371. Strain No. 12.

91372. Strain No. 15.

91373 and 91374. AGROPYRON SMITHII Rydb. **Wheatgrass.**

91373. Strain No. 22.

91374. Strain No. 23.

91368 to 91378—Continued.

91375 to 91377. AGROPYRON TENERUM Vasey. **Slender wheatgrass.**

91375. Strain No. 24.

91376. Strain No. 26.

91377. Strain No. 27.

91378. AGROPYRON SMITHII Rydb. **Wheatgrass.**

Variety *Mecca*. Grade No. 1, Saskatchewan No. 8.

91379. VISCUM sp. Loranthaceae.

From Hopei Province, China. Seeds obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received January 29, 1931.

No. 7634. *Tung ching*, winter grown. A red or pink-berried mistletoe purchased from a florist in Peiping, but grown about 200 miles northeast of the city. The plant had been growing on a poplar tree.

91380 to 91448.

From Ipswich, England. Seeds purchased from Thompson & Morgan. Received January 30, 1931.

91380 to 91382. ALLIUM spp. Liliaceae. **Onion.**

91380. ALLIUM SUBHIRSUTUM L. (*A. ciliatum* Cyr.).

A bulbous perennial, native to the Mediterranean region, with hairy margined, narrow leaves 1 foot high and white flowers.

For previous introduction see 78996.

91381. ALLIUM MOLY L. **Lily leek.**

For previous introduction and description see 91045.

91382. ALLIUM OSTROWSKIANUM Regel.

A particularly striking species, native to Turkestan. The deep-rose flowers are produced freely in many-flowered umbels on scapes 12 inches high.

For previous introduction see 82390.

91383. ALSTROEMERIA CHILENSIS Lem. Amaryllidaceae. **Chilean alstroemeria.**

A stout tuberous-rooted plant 2 to 4 feet high, with scattered obovate or spatulate leaves and large rosy red or whitish flowers in pairs. Native to Chile.

For previous introduction see 78872.

91384 to 91388. ANEMONE spp. Ranunculaceae.

91384. ANEMONE BALDENSIS L.

A tuberous-rooted white-flowered perennial about 6 inches high, native to Switzerland.

For previous introduction see 66911.

91385. ANEMONE FULGENS Gay.

A herbaceous perennial 1 foot high, with 3-lobed to 5-lobed basal leaves and deeply cut sessile involucral leaves. The solitary vivid scarlet flower is 2 inches across with black stamens. It is native to France.

91380 to 91448—Continued.

91386. ANEMONE HALLERI All.

A villous herbaceous perennial about 6 inches high, with pinnately divided leaves, involucral leaves in long narrow segments, and a large erect whitish-purple flower with yellow stamens. It is native to Switzerland.

91387. ANEMONE NARCISSIFOLIA L. (*A. narcissiflora* L.).

For previous introduction and description see 91278.

91388. ANEMONE NEMEROSA L. **European wood anemone.**

A delicate herbaceous perennial with a creeping rootstock and 5-parted toothed basal leaves appearing after the flower stems. The stems are simple, 3 to 8 inches high; the involucral leaves are petioled, 3 to 5 parted, and toothed; and the solitary white to purplish flower is 1 inch across. It is native to Europe.

91389. BULBINELLA HOOKERI (Colenso) Cheeseman (*Anthericum hookeri* Colenso). Liliaceae.

A New Zealand herbaceous perennial related to the asphodels, varying in size from 1 to 3 feet. The numerous glaucous-green leaves are linear, and the loose racemes of bright-yellow flowers are on slender scapes up to 10 inches long.

For previous introduction see 78879.

91390. ANTHERICUM RAMOSUM L. Liliaceae.

A herbaceous perennial with tuberlike rhizomes, narrowly linear leaves, and branching stems which bear racemes of small wheel-shaped white flowers. It is native to Europe.

91391. FATSIA JAPONICA (Thunb.) Decaisne and Planch. (*Aralia sieboldii* Hort.). Araliaceae.

A broadleaved evergreen undershrub, native to Japan.

For previous introduction see 80600.

91392. FATSIA JAPONICA (Thunb.) Decaisne and Planch. (*Aralia sieboldii* Hort.). Araliaceae.

Variety *Moseri*. A compact form.

91393. ARISTOLOCHIA ELEGANS Masters. Aristolochiaceae. **Calicoflower.**

For previous introduction and description see 90948.

91394. ARUM MACULATUM L. Araceae. **Lords-and-ladies.**

A tuberous-rooted herbaceous perennial closely resembling the American Indian turnip (*Arisaema triphyllum*). The plant is about 1 foot high with black-spotted, hastate leaves, and the spathe is spotted with purple. It is native to Europe.

91395. ASARUM EUROPAEUM L. Aristolochiaceae. **Wildginger.**

A creeping herbaceous perennial with kidney-shaped dark-green evergreen leaves on petioles 3 to 5 inches long, and greenish-purple flowers, half an inch across, on short peduncles close to the ground under the leaves. It is native to Europe.

91380 to 91448—Continued.

91396. ASCLEPIAS TUBEROSA L. Asclepiadaceae. **Butterflyweed.**

A hairy herbaceous perennial 2 to 3 feet high, native to the eastern part of the United States, with usually opposite lanceolate-oblong leaves and several umbels of orange-red flowers.

91397. ASPARAGUS LUTZII Hort. Convallariaceae.

Said to be a hybrid between *Asparagus plumosus nanus* and some other unknown form. The erect stems, 6 feet long, show little tendency to climb, but flower freely and persistently.

91398. ASPARAGUS VERTICILLATUS L. Convallariaceae.

A semiwoody climbing vine with stems 10 to 15 feet long, green angled flexuose branches, and filiform cladodes 2 inches long. The funnel-shaped, greenish-yellow flowers are in clusters of one to four and are followed by red berries a quarter of an inch in diameter. It is native to Persia and Siberia.

91399. ASPHODELINE LUTEA (L.) Reichenb. (*Asphodelus luteus* L.) Liliaceae. **Common Jacobs-rod.**

A hardy herbaceous perennial 2 to 4 feet high, with rough-margined leaves 2 to 12 inches long and racemes of lilylike yellow flowers. It is native to the Mediterranean region.

91400. ASPHODELUS RAMOSUS L. Liliaceae. **Asphodel.**

A stemless herbaceous perennial with firm linear tufted radical leaves and racemes of white lilylike flowers. It is native to southern Europe.

91401 and 91402. BETA VULGARIS CICLA L. Chenopodiaceae. **Leaf beet.**

91401. *Brasiliensis.* A variety with crimson and yellow leaves.

91402. *Dracaenaefolia.* A variety with narrow, dark-crimson leaves.

91403. QUAMASIA sp. (*Camassia hybrida* Hort.). Liliaceae. **Camas.**

A selection of named varieties, all of which are beautiful.

91404 to 91408. CORYDALIS spp. Papaveraceae.

91404. CORYDALIS CHEILANTHIFOLIA Hemsl. **Chinese corydalis.**

A small low perennial with erect, fernlike radical leaves 8 inches high and racemes, longer than the leaves, of yellow flowers resembling the dutchmans-breeches. It is native to China.

For previous introduction see 69912.

91405. CAPNOIDES LUTEUM (L.) Gaertn. (*Corydalis lutea* DC.). **Yellow corydalis.**

An erect or spreading annual about 7 inches high, with delicate pale-green much-divided leaves, and short racemes of pale-yellow flowers. Native to southern Europe.

For previous introduction see 66454.

91406. CORYDALIS OCHROLEUCA Koch.

A tuberous perennial 1 foot high with compound leaves having winged petioles and heart-shaped yellow and white flowers with yellow spurs. It is native to Italy.

91380 to 91448—Continued.

91407. CORYDALIS THALICTRIFOLIA Jameson.

A perennial herb with a woody elongated rhizome and large long-petioled finely divided leaves which resemble those of the meadowrue. The showy flowers are in spreading racemes opposite the leaves. It is native to China.

For previous introduction see 66456.

91408. CORYDALIS TUBEROSA DC.

A tuberous perennial less than 1 foot high, with finely divided leaves and heart-shaped purple and white flowers. It is native to France.

91409 to 91413. CYCLAMEN spp. Primulaceae.

91409. CYCLAMEN COUM Mill.

A spring-blooming tuberous-rooted plant, native from southeastern Europe to Persia, about 6 inches high, with rounded-reniform, uniformly green leaves and small scentless purple flowers.

For previous introduction see 79191.

91410. CYCLAMEN EUROPAEUM L. **European cyclamen.**

A more or less evergreen European perennial with a tuberous root, rounded or kidney-shaped leaves, white marbled above and purplish beneath, and fragrant bright-red flowers on scapes 4 or 5 inches high in autumn.

For previous introduction see 79192.

91411. CYCLAMEN MACROPHYLLUM Sieber.

A low tuberous-rooted perennial, native to southern Europe, with large cordate crenate leaves usually mottled with white, and, in autumn, white flowers on scapes 6 inches high.

For previous introduction see 79054.

91412. CYCLAMEN NEAPOLITANUM Tenore. **Neapolitan cyclamen.**

For previous introduction and description see 91280.

91413. CYCLAMEN NEAPOLITANUM Tenore. **Neapolitan cyclamen.**

Variety *album.* A form with white flowers.

91414 to 91418. DATURA spp. Solanaceae.

91414. DATURA ARBOREA L. **Floripondio.**

A small tree, native to Peru and Chile, with ovate-lanceolate leaves and large trumpet-shaped greenish-white flowers.

For previous introduction see 77054.

91415. DATURA CHLORANTHA Hook. **Yellow floripondio.**

Variety *Golden Queen.* A glabrous shrub with broadly ovate, nearly triangular, sharply toothed leaves and pendulous yellow flowers. Probably a garden hybrid of unknown parentage.

91416. DATURA METEL FASTUOSA (L.) Safford (*D. cornucopia* Hort.). **Cornucopia floripondio.**

An ornamental herbaceous annual, common throughout India and the East Indies, which varies in height from 2

91380 to 91448—Continued.

to 6 feet. It has entire or deeply toothed leaves about 4 inches long and flowers 7 inches or more in length, varying in color from white to lavender or rose. The plant is propagated by cuttings.

For previous introduction see 51603.

91417. DATURA METELOIDES DC. **Sacred datura.**

A perennial, though usually cultivated as an annual, with slender forked branches, nearly entire, unequally ovate leaves, and fragrant white flowers suffused with violet. It is native to northern Mexico.

91418. DATURA STRAMONIUM L.

A glabrous annual with green stems, ovate-sinuate to cut-toothed leaves, and white flowers. A well-known ill-scented weed.

91419. DICENTRA EXIMIA (Ker) Torr. Papaveraceae. **Fringed bleedingheart.**

A stemless herbaceous perennial with finely cut glaucous leaves 1 to 2 feet high and compound racemes of pink heart-shaped flowers 1 inch long. It is native to western New York and south to Georgia and Tennessee in the mountains.

91420. DICENTRA SPECTABILIS (L.) Lemaire. Papaveraceae. **Bleedingheart.**

A herbaceous perennial with stems 1 to 2 feet high, ternately compound leaves, and simple racemes of rose-colored heart-shaped flowers. It is native to Japan.

91421. EREMOSTACHYS LACINIATA Bunge. Menthaceae.

An erect herbaceous perennial 1 to 2 feet high, with doubly pinnately divided leaves, and spikes made up of many-flowered whorls of mintlike yellow flowers. It is native to Asia Minor.

91422. ERYTHRONIUM DENS-CANIS L. Liliaceae. **Troutlily.**

A bulbous herbaceous perennial with a stem 4 to 6 inches high, bearing a pair of ovate-acuminate leaves, blotched with reddish brown, and a solitary rose-colored lilylike flower with strongly reflexed segments. It is native to central Europe and Japan.

91423. FREESIA HYBRIDA Hort. Iridaceae.

Ragionieri hybrids, said to produce spotted and veined fragrant flowers in tinted shades of pink, rose, purple, blue, brown, and orange.

91424. FRITILLARIA TUBAEFORMIS Gren. and Godr. (*F. delphinensis* Gren.). Liliaceae. **Fritillary.**

A tuberous perennial 6 to 12 inches high, with oblanceolate to linear leaves near the middle of the stem, and wine-purple, yellow-spotted, and checkered flowers. It is native to the Alps in France.

91425. FRITILLARIA PYRENAICA L. Liliaceae. **Fritillary.**

A bulbous perennial 1 to 2 feet high, with 6 to 10 glaucous linear leaves and usually a single tuliplike dark-purple flower spotted green. It is native to the Pyrenees.

91380 to 91448—Continued.

91426. GENTIANA LUTEA L. Gentianaceae. **Yellow gentian.**

A coarse perennial herb, too large for the rock garden, with three to four stems bearing handsome rugose foliage, crowned in late summer in the upper whorls of leaves, with dense clusters of slender-lobed golden-yellow flowers.

For previous introduction see 78932.

91427. GERANIUM MACRORRHIZUM L. Geraniaceae. **Cranesbill.**

A large-rooted herbaceous perennial with a woody base, stems 1 to 2 feet high, 3-lobed to 5-lobed leaves often colored red, and blood-red flowers in bunches at the end of the stem. It is native to southern Europe.

91428. HOMERIA COLLINA (Thunb.) Vent. Iridaceae.

A perennial plant, native to the Cape of Good Hope, with a globose corm covered with fibrous coats, and usually one convolute-concave narrow leaf, much longer than the stem. The erect stem bears one or more clusters of handsome red-orange flowers.

For previous introduction see 48676.

91429. HOUSTONIA CAERULEA L. Rubiaceae. **Bluets.**

A tufted perennial with slender stems 3 to 6 inches high, small hairy spatulate leaves, and small salverform flowers varying from blue to white with a yellow eye. It is native to the eastern United States and flowers in early spring.

91430. QUAMOCLIT PENNATA (Desr.) Voigt. (*Ipomoea cardinalis* Hort.). Convolvulaceae. **Cypressvine.**

Said to be a form with intense cardinal-red flowers.

91431. IRIS DELAVAYI Micheli. Iridaceae. **Delavay iris.**

An iris, 2 to 4 feet high, with violet and white flowers. Native to southwestern China.

For previous introduction see 69918.

91432. IRIS RETICULATA Bieb. Iridaceae. **Netted iris.**

A bulbous iris, native to Asia Minor, with short erect leaves 1 to 2 feet high, a very short stem, and fragrant bright-purple flowers which appear early in spring before the leaves develop.

For previous introduction see 79915.

91433. LATHYRUS TUBEROSUS L. Fabaceae.

A tuberous-rooted lathyrus, native to northern Europe, which resembles the flat pea (*L. sylvestris*), but has red flowers.

91434. LEWISIA HOWELLII (S. Wats.) Robinson. Portulacaceae.

A low succulent perennial with a rosette of flat oblong to ovate leaves having thin crisped margins, and deep-rose flowers in racemose cymes. It is native to Oregon.

91380 to 91448—Continued.

91435. LACINARIA PYCNOSTACHYA (Michx.) Kuntze (*Liatris pycnostachya* Michx.). Asteraceae. **Cattail gayfeather.**

A stout herbaceous perennial with lanceolate to linear leaves and spikes 5 to 18 inches long of heads of purple flowers. It is native to the central United States.

91436. LACINARIA SPICATA (L.) Kuntze (*Liatris spicata* Willd.). Asteraceae. **Spike gayfeather.**

For previous introduction and description see 90958.

91437. LIBERTIA FORMOSA R. Grah. Iridaceae.

A herbaceous perennial with rigid linear leaves 1 to 2 feet long and a stem 2 to 3 feet high, bearing an inflorescence made up of dense clusters of white flowers 1 inch across. It is native to Chile.

91438. ASPARAGUS ASPARAGOIDES (L.) W. F. Wight (*Myrsiphyllum asparagoides* Willd.). Convallariaceae. **Smilax asparagus.**

Variety *myrtifolius*. An extremely light and elegant variety with much smaller leaves than the type.

91439. OSTROWSKIA MAGNIFICA Regel. Campanulaceae. **Giant bellflower.**

For previous introduction and description see 91285.

91440. OXALIS CORNICULATA ATROPURPUREA Planch. (*O. tropaeoloides* Vilm.). Oxalidaceae. **Nasturtium oxalis.**

For previous introduction and description see 90960.

91441. OXALIS VALDIVIENSIS Barn. Oxalidaceae. **Chilean oxalis.**

For previous introduction and description see 90961.

91442. PHORMIUM TENAX Forst. Liliaceae. **New Zealand flaxlily.**

Variety *variegata*. A form with beautifully variegated foliage.

91443. PODOPHYLLUM EMODI Wall. Berberidaceae. **Himalayan mayapple.**

A herbaceous perennial about 1 foot high, native to India. In early spring the 5-lobed to 7-lobed leaves are bronze red and are said to be edible; the flowers are white or pale rose, and the deep red fruits are as large as a hen's egg.

For previous introduction see 46092.

91444. POLYGONUM BISTORTA L. Polygonaceae.

Variety *superbum*. A dwarf tufted form with pink flowers in heads on long slender stems.

91445. RANUNCULUS GRAMINEUS L. Ranunculaceae. **Grassy buttercup.**

A smooth herbaceous perennial 6 to 12 inches high, with linear to lanceolate leaves and bright-yellow flowers. It is native to Europe.

91446. ROSCOEA HUMEANA Balf. and Smith. Zinziberaceae.

For previous introduction and description see 91050.

91380 to 91448—Continued.

91447. ROSCOEA PURPUREA J. E. Smith. Zinziberaceae.

A perennial herb 1 foot high, with lanceolate leaves and purple, pale-lilac, or white flowers in a sessile spike. Native to the Himalayas in northern India.

For previous introduction see 82396.

91448. SALVIA PATENS Cav. Menthaceae. **Gentian sage.**

A pilose herbaceous perennial with erect stems 1 to 3 feet high, ovate-deltoid crenate leaves, and spikes of tubular blue flowers 2 inches long. It is native to Mexico.

91449 to 91451.

From Africa. Plant material presented by C. Bey Rozet, Direction Générale de l'Agriculture, Morocco, through H. Brayard, Directeur de la Ferme Expérimentale, Marrakech. Received January 30, 1931.

91449. CITRUS sp. Rutaceae.

Seeds of *Khoubs el Asia*.

91450. PYRUS sp. Malaceae. **Pear.**

Scions of a native pear.

91451. PYRUS sp. Malaceae. **Pear.**

Scions of *Banouje*, an Arab pear.

91452 to 91455.

From Nicosia, Cyprus. Seeds presented by George Frangos, through the Director of Agriculture. Received January 30, 1931.

91452. ARISTOLOCHIA sp. Aristolochiaceae.

Collected at Platres, October 14, 1930.

91453. DELPHINIUM STAPHISAGRIA L. Ranunculaceae. **Larkspur.**

For previous introduction and description see 90974.

91454. MANDRAGORA OFFICINARUM L. Solanaceae. **Mandrake.**

Collected at Pellapaise, Cyprus, September 15, 1930. A perennial herb with thick tuberous roots, broad undulate-margined leaves, bell-shaped greenish-yellow flowers, and fleshy globose berries. It is native to the Mediterranean region.

91455. PAEONIA CORALLINA Retz. Ranunculaceae. **Coral peony.**

Collected at Prodromos village, September 2, 1930. A tall wild peony with carrotlike roots and purple flowers, rarely whitish or yellowish. Native to southern Europe.

For previous introduction see 89082.

91456 and 91457.

From Africa. Cuttings presented by C. Bey Rozet, Direction Générale de l'Agriculture, Morocco, through H. Brayard, Directeur de la Ferme Expérimentale, Marrakech. Received January 31, 1931.

91456. PRUNUS sp. Amygdalaceae. **Plum.**

Beloiana.

91457. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Bullida.

91458. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Edinburgh, Scotland. Seeds presented by Dobbie & Co. (Ltd.). Received February 3, 1931.

Primrose Gage. Collected in the village of a seminomadic tribe in the jungle of southern India, between 5,000 and 8,000 feet altitude. The foliage is more glaucous green than that of the ordinary tomato, and the primrose-yellow fruit, about the size of a golf ball, has a bloom like that of a grape. It has a sharp sweet flavor which is quite distinct from that of all other tomatoes.

91459 to 91465.

From Stockton, Calif. Plants presented by the Vistica Nurseries Co. Received February 4, 1931.

91459. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

A pendulous variety with double red flowers.

91460. BETULA PENDULA Roth. Betulaceae. **Birch.**

A form with purple leaves.

91461 to 91465. PRUNUS spp. Amygdalaceae.

91461. PRUNUS MUME Sieb. and Zucc. **Japanese apricot.**

A pendulous variety with red double flowers.

91462 to 91464. PRUNUS SERRULATA Lindl. **Oriental cherry.**

91462. A pendulous variety with double pink flowers.

91463. A variety with light-pink very large double flowers borne in great clusters. The flowers open in succession over a relatively long period.

91464. A variety with large pale-pink double flowers with leaflike pistils. A late bloomer.

91465. PRUNUS SUBHIRTELLA PENDULA (Sieb.) Tanaka. **Shidarehigan.**

Park weeping. A strain with deep-pink flowers borne in great profusion. The original tree is in Golden Gate Park, San Francisco.

91466. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Africa. Seeds presented by C. Bey Rozet, Direction Générale de l'Agriculture, Morocco, through H. Brayard, Directeur de la Ferme Expérimentale, Marrakech. Received January 31, 1931.

Seeds of native varieties.

91467 to 91469.

From Java. Seeds purchased from De Thee-Factorij, Bandoeng. Received February 5, 1931.

91467. BRADBURYA PLUMIERI (Turp.) Kuntze (*Centrosema plumieri* Turp.). Fabaceae.

A tropical ornamental vine, native to Brazil, with white and red flowers. It is of value as a green manure.

For previous introduction see 81407.

97467 to 91469—Continued.

91468. CROTALARIA ANAGYROIDES H. B. K. Fabaceae.

A shrubby leguminous plant native to tropical America. It is up to 6 feet high and is used as a cover plant in the East Indies.

For previous introduction see 81419.

91469. CROTALARIA USARAMOENSIS Baker f. Fabaceae.

A native of East Africa which has proved very successful as a green manure when grown in alternation with corn, producing large quantities of vegetation rich in nitrogen. In the cinchona plantations of Java it endures partial shade and forms a low dense growth, binding the edges of the terraces. It is a very strong grower, 8 feet or more in height, with long spikes of yellow flowers.

For previous introduction see 81424.

91470 to 91475. DAUCUS CAROTA L. Apiaceae. **Carrot.**

From Voorburg, Netherlands. Seeds purchased from N. V. Maatschappij voor Zaadselectie en Zaadfeelf, Zwaan & Van der Nolen. Received February 5, 1931.

91470. *Amsterdam forcing.*

91471. *French forcing; Zwaan's select strain.*

91472. *Nantes Half Long.*

91473. *Zwaan's Delicacy Half Long.*

91474. *Zwaan's Grant,* stump rooted.

91475. *Zwaan's Winter Perfection.*

91476 to 91479. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

From Navojoa, Sonora, Mexico. Seeds collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received February 5, 1931.

Collected from trees 20 to 45 feet high, found growing in scrub, in the foothills near Alamos, Sonora, between 500 and 1,500 feet altitude. The fruits were selected for their large diameter.

91476. No. 23. Selection No. 1.

91477. No. 24. Selection No. 2.

91478. No. 25. Selection No. 3.

91479. No. 26. Selection No. 4.

91480 to 91485. CYDONIA OBLONGA Mill. (*Pyrus cydonia* L.). Malaceae. **Quince.**

From Kent, England. Plants purchased from the East Malling Research Station, East Malling. Received February 6, 1931.

91480. *Angera* (A) quince stock.

91481. *Common* (B) quince stock.

91482. *Quince* (C); an early-fruiting type.

91483. (E) An apple-shaped quince.

91484. (F) A pear-shaped quince.

91485. (G) *Portugal* quince.

91486 to 91489.

From India. Seeds presented by the agricultural officer, Northwest Frontier Province, Peshwar. Received February 2, 1931.

91486. DIOSPYROS LOTUS L. Diospyraceae. **Dateplum.**

For previous introduction and description see 91323.

91487. OLEA FERRUGINEA Royle (*O. cuspidata* Wall.). Oleaceae. **Olive.**

A tree up to 30 feet high with coriaceous oblong leaves 2 to 3 inches long, short axillary panicles of small flowers, and small ellipsoid black fruits one-third of an inch long. It is native to India.

91488. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

A wild apricot.

91489. PYRUS PASHIA Buch.-Ham. Malaceae. **Pashi pear.**

A small tree common in Burma and northern India in the Himalayas at altitudes of 3,000 to 8,000 feet. The barren branchlets usually end in a spine. The simple, ovate or ovate-lanceolate, long-pointed leaves, 2 to 4 inches long, are tomentose when young, ultimately glabrous. The white flowers, tinged with pink, 1 inch in diameter, are in simple corymbs of 10 or fewer. The yellowish-brown apple-shaped fruits, half an inch in diameter, are rough with small white spots.

For previous introduction see 52342.

91490. ACACIA sp. Mimosaceae.

From South Australia. Seeds presented by J. Howard Johnson, St. Peters. Received February 7, 1931.

Dead finish. Collected at Bon Bon, about 500 miles from Adelaide, South Australia. A low shrub, 10 to 12 feet high, with dull-green, needlelike foliage and yellow flowers. The trunk and branches are particularly crooked, so that the wood can only be used for veneers and in making small articles, such as souvenirs, pipes, etc., although the marking of the heavy dark-red wood is very beautiful. The native Australians use this wood to make their boomerangs. It grows here in a limestone soil with not much water.

91491. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Algiers, Algeria. Seeds presented by Jacob Ben Lalou, through the American consul, Oscar S. Heiser. Received February 7, 1931.

91492 to 91515. DIOSPYROS spp. Diospyraceae.

From Okitsu, Japan. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 10, 1931.

Received through Dr. K. Nagai, Acting Director, Okitsu Imperial Experiment Station, Okitsu, Shizuoka Ken, December 20, 1930.

91492 to 91514. DIOSPYROS KAKI L. f. **Kaki persimmon.**

91492 to 91515—Continued.

91492. No. 7647. *Aosa,* nonastringent.

91493. No. 7659. *Atago,* astringent.

91494. No. 7650. *Banshi,* astringent.

91495. No. 7641. *Benigaki,* astringent.

91496. No. 7655. *Eboshi,* astringent.

91497. No. 7652. *Fujiwara-gosho,* nonastringent.

91498. No. 7643. *Gijo-sha-kokushi,* astringent.

91499. No. 7646. *Heguro-gaki,* nonastringent.

91500. No. 7660. *Hgakushi,* astringent.

91501. No. 7645. *Ibogaki,* astringent.

91502. No. 7648. *Ichiryo,* astringent.

91503. No. 7649. *Inamochi,* astringent.

91504. No. 7654. *Izaemon,* astringent.

91505. No. 7639. *Kiyosu tanenashi,* astringent.

91506. No. 7657. *Kubo,* nonastringent.

91507. No. 7644. *Kunitomi,* astringent.

91508. No. 7653. *Kurogaki,* nonastringent.

91509. No. 7642. *Mikagemaru,* nonastringent.

91510. No. 7638. *Sahuahu-mishirazu,* astringent.

91511. No. 7658. *Sangokuichi,* astringent.

91512. No. 7651. *Shimpei,* astringent.

91513. No. 7656. *Wase-jisha,* astringent.

91514. No. 7640. *Yukineri,* nonastringent.

91515. DIOSPYROS LOTUS L. **Dateplum.**

No. 7661. *Naga-mamegaki.*

For previous introduction and description see 91323.

91516 and 91517.

From Seville, Spain. Seeds presented by José Gomez Cherlo, through Frank L. Goll, Bureau of Plant Industry. Received February 11, 1931.

91516. ERYTHRINA sp. Fabaceae. **Coraltree.**

A handsome flowering shrub, apparently well adapted to severe dryness and warm temperature.

91517. RICINUS COMMUNIS L. Euphorbiaceae. **Common castor-bean.**

91518 and 91519.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received February 11, 1931.

91518. ILEX LATIFOLIA Thunb. Aquifoliaceae. **Holly.**

A Japanese evergreen holly, one of the most attractive of the genus, which sometimes develops into a tree 60 feet tall. The glossy green leaves, 3 to 7 inches long, are oval or narrowly oblong, and the red berries, about one-third of an inch in diameter, are produced in dense clusters.

For previous introduction see 83975.

91518 and 91519—Continued.

91519. LILIUM AURATUM Lindl. Liliaceae. **Goldband lily.**

For previous introduction see 83803.

91520. PRUNUS SUBHIRTELLA PENDULA (S.eb.) Tanaka. Amygdalaceae. **Shidarehigan.**

From Chevy Chase, Md. Scions presented by J. Marion Shull, through Paul Russell, Bureau of Plant Industry. Received February 11, 1931.

For previous introduction and description see 91465.

91521 to 91523. ACER spp. Aceraceae. **Maple.**

From southern Manchuria. Seeds purchased from Manshu Nosan Shokai (Inc.), seed growers, Dairen. Received February 11, 1931.

91521. ACER DIABOLICUM PURPURASCENS (Franch. and Sav.) Rehd. **Red-devil maple,**

A tree up to 50 feet high with red flowers appearing before the leaves, which are 5-lobed and reddish while young. The fruits, with spreading wings and bristly nutlets, are purplish while young. It is native to Japan.

91522. ACER RUFINERVE Sieb. and Zucc.

For previous introduction and description see 91243.

91523. ACER TSCHONOSKII Maxim.

A graceful shrubby tree, sometimes 20 feet high, native to Japan. The leaves turn bright yellow in the autumn.

For previous introduction see 83777.

91524. LIVISTONA CHINENSIS (Jacq.) R. Br. Phoenicaceae. **Chinese fan palm.**

From Nassau, Bahama Islands. Seeds presented by the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received February 11, 1931.

No. 9101. A palm, native to China, with a short thick trunk up to 6 feet high and 1 foot thick, having a crown of reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch long.

For previous introduction see 85742.

91525 and 91526.

From Fort Dauphin, Madagascar. Plants presented by Rev. A. S. Burgess, through C. F. Swingle, Bureau of Plant Industry. Received February 12, 1931.

91525. KALANCHOE BEHARENSIS Drake. Crassulaceae.

Mongy vola. A shrubby succulent about 12 feet high, with large thick fleshy ovate leaves up to 8 inches long. These are rusty tomentose above and silvery below, both surfaces becoming dingy with age. The pale-yellow flowers are borne in ample terminal panicles. Native to Madagascar.

For previous introduction see 78423.

91526. KALANCHOE sp. Crassulaceae.

Tavytavy.

91527. PRUNUS SIMONII Carr. Amygdalaceae. **Apricot-plum.**

A superior variety of the apricot-plum, of uncertain origin, growing at the United States Plant Introduction Garden, Chico, Calif. The quality of the fruit is said by pomologists to be considerably higher than that of other known forms of this species, and there is less bitterness in the skin. The other known forms apparently have been of interest mainly to the breeder, while this strain may prove of value as it is, at least as a home fruit.

91528 to 91553.

From the Union of Soviet Socialist Republics. Seeds presented by V. P. Alekseev, Subtropical Branch of the Institute of Applied Botany and New Cultures, Sukhum, Abkhasia Republic, through A. Kol, Leningrad. Received February 12, 1931.

91528. CITRULLUS COLOCYNTHIS (L.) Schrad. Cucurbitaceae. **Colocynth.**

No. 40912. Crop of 1929. A perennial herbaceous vine allied to the watermelon. The small round hard green fruits, 3 inches in diameter, are used medicinally as a purgative.

For previous introduction see 74177.

91529. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 34072. Crop of 1927.

91530. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

No. 34068. Crop of 1927.

91531. DAUCUS CAROTA L. Apiaceae. **Carrot.**

No. 34228. Crop of 1929.

91532. LACTUCA VIROSA L. Cichoriaceae.

No. 34254. Crop of 1929. A biennial with a long fusiform root and a tall leafy stem often branched at the base. The sagittate-cordate ovate-oblong leaves are spiny and the sulphur-yellow flowers are in cylindrical heads. Native to rocky places in central and southern Europe.

91533. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

No. 34503.

91534 to 91545. PHYSALIS spp. Solanaceae. **Groundcherry.**

91534 and 91535. PHYSALIS ANGULATA L.

A plant with medium-sized fruits which are not edible out of hand.

91534. No. 40169.

91535. No. 40170.

91536. PHYSALIS FUSCO-MACULATA Dun.

No. 35409. A prostrate plant with medium-sized orange-colored fruit which is very sweet, but mawkish.

91537. PHYSALIS FRANCHETI Masters. **Lantern groundcherry.**

No. 40179. A plant with bright-red very ornamental fruit which is nonedible.

91538 to 91541. PHYSALIS IXOCARPA Brot. **Tomatillo.**

91538. No. 35410. Fruit of good size, edible, but mawkish.

91528 to 91553—Continued.

91539. No. 35410a. Collected in 1930.

91540. No. 35415. The yellow fruit is very large, sweet, but mawkish.

91541. No. 35420. A very productive variety with large yellow fruit, which is sweet, but mawkish. Very much like No. 35415 [91540].

91542. PHYSALIS PERUVIANA L. **Peruvian groundcherry.**

No. 14547.

For previous introduction and description see 91043.

91543. PHYSALIS PHILADELPHICA Lam.

No. 40177. Crop of 1928.

91544. PHYSALIS PUBESCENS L. **Common groundcherry.**

No. 35416. A plant with small very sweet fruit, which is edible out of hand.

91545. PHYSALIS VISCOSA L.

No. 35424. A prostrate plant with medium-sized orange-colored fruit, which is very sweet, but mawkish. It is very much like No. 35409 [91536].

91546 to 91553. SOLANUM spp. Solanaceae.

91546. SOLANUM AETHIOPICUM L.

No. 35300. A vigorous ornamental plant, with small fruits which resemble tomatoes in shape.

91547. SOLANUM CAPSICASTRUM Link. **False Jerusalem-cherry.**

No. 34147. A very ornamental perennial plant, with small round orange-colored fruits.

91548. SOLANUM KHASIANUM C. B. Clarke. **Nightshade.**

No. 40404. An ornamental plant with large prickly leaves and fruits the size of small apples.

91549. SOLANUM MACROCARPON L. **Nightshade.**

No. 35304. A plant with medium-sized fruits which resemble tomatoes; said to be edible.

91550. SOLANUM NIGRUM L. **Black nightshade.**

No. 35319. Variety *chlorocarpum*. A plant with small edible green-colored fruits.

91551. SOLANUM NIGRUM L. **Black nightshade.**

No. 35305. Variety *pumila*. A small plant with edible fruit.

91552. SOLANUM PYRACANTHUM Jacq. **Nightshade.**

No. 19833. A plant with all parts covered by prickles. The bright-red round fruits are edible.

91553. SOLANUM SISYMBRIFOLIUM Lam. **Nightshade.**

No. 35316. A plant with small round black fruit.

91554 to 91561.

From Manchuria and Chosen. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 12, 1931.

91554 to 91561—Continued.

91554 and 91555. PUERARIA THUNBERGIANA (Sieb. and Zucc.) Benth. Fabaceae. **Kudzu-bean.**

Seeds purchased December 11, 1930, at Dairen, Manchuria, from Manshu Nosan Shokai (Inc.), seed growers.

91554. No. 6646. Collected in mountain regions in Kwantung, southern Manchuria.

91555. No. 6647. Collected in the mountain regions of northeastern Chosen.

91556 to 91561. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 91556 to 91559 were received through the South Manchurian Railway Agricultural Bureau from Kanto district, Manchuria, December 15, 1930.

Nos. 91556 and 91557 were from Liang Cheng Son.

91556. No. 6652. Medium-sized oval yellow beans with slate-black hilum; used for oil and oil meal.

91557. No. 6653. A mixture of medium-small to medium-sized yellow varieties; used for oil and oil meal.

91558. No. 6654. *Hwan-pau-shu.* From Juitzukai. A medium-sized nearly round light-yellow bean with pale hilum; used for oil and oil cake.

91559. No. 6655. From Liang Cheng Son. A mixed sample of yellow-seeded varieties; used for oil and oil meal.

Nos. 91560 and 91561 were received from the Tansen Agricultural Society, Tansen, Kankyo Nando Prefecture, Chosen, December 17, 1930.

91560. No. 6656. *Tansenkii.* A large nearly round light-yellow bean with pale hilum; used for food purposes.

91561. No. 6657. *Tansen usuao.* A large oval light greenish-yellow bean with pale hilum; used as a green-manure crop.

91562 to 91592.

From Quetta, India. Seeds purchased from the Quetta Fruit Agency. Received February 13, 1931.

A collection of seeds introduced for the use of specialists working with fruits and vegetables.

91562. ALLIUM CEPA L. Liliaceae. **Onion.**

Piaz.

91563. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. **Nectarine.**

91564. ASPARAGUS OFFICINALIS L. Convallariaceae. **Garden asparagus.**

91565 to 91568. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

91565. *Gardai.*

91566. *Kadu-Sargai.*

91567. *Uzda.*

91568. *Special variety.*

91562 to 91592—Continued.

91569 to 91582. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

91569. *Alaf Khani.*
91570. *Gardai.*
91571. *Hirati.*
91572. *Kabuli.*
91573. *Kalandri.*
91574. *Kandahari.*
91575. *Kharwari Dastambol.*
91576. *Mashade.*
91577. *Shinag.*
91578. *Sufaidak.*
91579. *Sur.*
91580. *Tarimai.*
91581. *Special variety, very sweet.*
91582. Assorted melon seeds.

91583. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

91584. CUCUMIS SATIVUS L. Curcurbitaceae. **Cucumber.**

Snake cucumber.

91585. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

A round pumpkin.

91586. DAUCUS CAROTA L. Apiaceae. **Carrot.**

91587. LAGENARIA LEUCANTHA (Duchesne) Rusby (*L. vulgaris* Seringe). Cucurbitaceae. **Calabash gourd.**

Long pumpkin.

91588. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

Lucerne.

91589. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Chighali. Yellow-colored apricots.

91590. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

A small white variety.

91591. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

Banyan.

91592. SPINACIA OLERACEA L. Chenopodiaceae. **Common spinach.**

91593. TELOSMA CORDATA (Burm. f.) Merr. (*Pergularia odoratissima* J. E. Smith). Asclepiadaceae.

From China. Seeds presented by Prof. W. Y. Chun, of the Sun Yat-sen University, Canton, through H. Green, Superintendent, Botanical and Forestry Department, Hong Kong. Received February 13, 1931.

A woody vine, native to the East Indies, with opposite ovate-cordate membranous leaves and umbellike cymes of salver-shaped fragrant aromatic greenish flowers.

91594. DIOSPYROS sp. Diospyraceae. **Persimmon.**

From Peiping, China. Trees and scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 13, 1931.

No. 7700. Plants collected on the mountain side. Said to be the white-barked persimmon.

91595. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Belize, British Honduras. Seeds collected by Prof. Harley H. Bartlett, Department of Botany, University of Michigan, Ann Arbor, Mich. Received February 14, 1931.

A variety grown locally.

91596. BETA VULGARIS L. Chenopodiaceae. **Sugar beet.**

From Germany. Seeds purchased through the National Seed Co., New York, N. Y. Received February 14, 1931.

"Normal" "Rabbethge and Giesecke Kleinwanzleben Original."

91597. (Undetermined.)

From Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda. Received February 14, 1931.

Potato-nut. A large timber tree which becomes 3 to 4 feet in diameter and has cherrylike wood. The seeds are about the size and shape of acorns, and the flavor of the kernel reminds one of a raw potato.

For previous introduction see 86001.

91598. ACACIA LONGIFOLIA SOPHORAE (Labill.) F. Muell. Mimosaceae.

From Melbourne, Victoria, Australia. Seeds from the Melbourne Botanic Garden, presented by Pomeroy L. Dunbar, Boynton, Fla. Received February 16, 1931.

A yellow-flowered rapid-growing evergreen shrub or small tree 15 to 20 feet high, excellent for preventing the encroachments of the sea along sandy coasts. It frequents the coastline of southeastern Australia from southern Queensland to South Australia, and also Tasmania.

For previous introduction see 80061.

91599 to 91607. FRAGARIA spp. Rosaceae. **Strawberry.**

From Loiret, France. Plants presented by Edmond Versin. Received February 16, 1931.

A collection of new varieties, introduced for the use of department specialists.

91599. *La Frana Novelle.*
91600. *La Normandie.*
91601. *Ministre Cheroy.*
91602. *Odette Gaulthier.*
91603. *Otvenir.*
91604. *Precieuse.*
91605. *Radio.*
91606. *Resurrection.*
91607. *Surpasse Aurore.*

91608. PISTACIA sp. Anacardiaceae.

From Greece. Seeds presented by George T. Choremis, Chios Island, through David Fairchild, Bureau of Plant Industry. Received February 16, 1931.

Turpentine tree.

91609. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From England. Seeds purchased from Clover Growers (Ltd.), Montgomery. Received February 16, 1931.

Certified Montgomery Late Flowering.

91610. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

From northern Nigeria, Africa. Seeds presented by the Agricultural Department of Nigeria, through Fred H. Hull, Assistant Agronomist, Agricultural Experiment Station, Gainesville, Fla. Received February 13, 1931.

A large groundnut, native to Bin, Bornu, northern Nigeria.

91611. PRUNUS INCISA Thunb. Amygdalaceae. **Mame cherry.**

From Philadelphia, Pa. Scions presented by J. C. Wister. Received February 17, 1931.

An ornamental Japanese cherry which is usually a large compact shrub, occasionally a small tree about 25 feet high. The flowers, three-fourths of an inch across, appear in drooping clusters before the deeply serrate leaves, and are white or rosy, with bright-red calyxes and bright-yellow anthers. The petals fall early, but the calyxes, which gradually grow brighter, remain on the young fruits for some time and are quite showy.

For previous introduction see 77855.

91612. ANDROPOGON INTERMEDIUS R. Br. Poaceae. **Grass.**

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, Director, Agricultural Experiment Station. Received February 18, 1931.

Variety *acidulus*. A perennial grass with a short, hard rhizome and erect or ascending stems 3 feet or more high. The linear leaves are 3 to 8 inches long, pale green or with a reddish tinge, and the obovoid panicle is 2 to 3 inches long. It is native to western tropical Africa and has been introduced into the West Indies.

91613 to 91617. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Algeria, Africa. Seeds presented by Julien Brichet, Chief of the Horticultural Service in Algeria, through Frederic T. Bioletti, College of Agriculture, Berkeley, Calif. Received February 18, 1931.

91613. From Anis, in the Aures Mountains.

91614. From Arbou, Souman Valley, Djudjura Mountains.

91615. From M'Sila Oasis.

91616. From Menaa, in the Aures Mountains.

91617. From Menaa, in the Aures Mountains.

91618 and 91619.

From Mexico. Seeds collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received February 19, 1931.

91618 and 91619—Continued.

91618. CEIBA sp. Bombacaceae.

From Jesus G. Ortega, Mazatlan, Sinaloa. The fruits of this tree are mostly spherical.

91619. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

No. 30. A tree 40 feet high found at 400 feet altitude, in the foothills between Mazatlan and Modesto, Sinaloa, February 4, 1931.

91620 to 91622. ANNONA CHERIMOLA Mill. Annonaceae. **Cherimoya.**

From Chula Vista, Calif. Scions presented by William H. Sallmon. Received February 19, 1931.

Scions of new varieties propagated by Mr. Sallmon.

91620. *Ryerson.*

91621. *Sallmon No. 1.*

91622. *Sallmon No. 2.*

91623. PRUNUS SUBHIRTELLA Miquel. Amygdalaceae. **Higan cherry.**

From Jamaica Plain, Mass. Scions presented by J. G. Jack, Arnold Arboretum. Received February 19, 1931.

Arnold Arboretum No. 3674. The so-called typical form of the Higan cherry, which is not known in the wild state, forms a rather low wide-spreading tree with smooth gray bark. In early spring, before the leaves appear, the tree is hidden in a dense mass of very light-pink flowers, slightly larger than those of other Higan cherries. The small black fruits follow early in the summer.

For previous introduction see 77707.

91624 to 91631.

From Germany. Seeds purchased from Heinr. Mette, Quedlinburg. Received February 20, 1931.

91624. ANTIGONON LEPTOPUS Hook. and Arn. Polygonaceae. **Rosa-de-montana.**

No. 11424. A handsome summer-blooming climber, native to Mexico, and adapted for greenhouse culture or for growing out-of-doors in the far South. The flowers, with colored sepals, are in many-flowered racemes.

For previous introduction see 62907.

91625 to 91627. EREMURUS spp. Liliaceae.

91625. EREMURUS BUNGEI Baker. **Desertcandle.**

No. 18452. Variety *perfectus*. A low herbaceous perennial with a rosette of linear leaves 1 foot long and bright-yellow flowers in a dense raceme 4 to 5 inches long on a scape 1 foot high. It is native to Persia.

91626. EREMURUS HIMALAICUS Baker. **Himalayan desertcandle.**

No. 18453. A tall herbaceous perennial with lanceolate leaves 1 to 2 feet long in a rosette at the base of the stem which rises to 6 feet and bears a spike, 2 to 3 feet long, of white flowers. It is native to India.

For previous introduction see 69356.

91624 to 91631—Continued.

91627. EREMURUS ROBUSTUS Regel. Giant desertcandle.

No. 18455. A tall, hardy herbaceous perennial with pale-pink flowers on a stalk 5 to 8 feet high. Native to Turkestan.

For previous introduction see 73190.

91628. HELIANTHUS SCABERRIMUS Ell. (*H. rigidus* Desf.). Asteraceae. Prairie sunflower.

No. 19346. A stout herbaceous perennial with rough branching stems 4 to 6 feet high. The thick rigid oblong-lanceolate leaves are rough on both sides and 6 to 12 inches long, and the bright-yellow flowers are 2 to 4 inches across. It flowers from August to October and is native to the eastern part of the United States.

For previous introduction see 62793.

91629. HELIANTHUS STRUMOSUS L. Asteraceae. Woodland sunflower.

No. 19348. A tall herbaceous perennial with glaucous stems, 3 to 7 feet high, ovate-lanceolate entire or toothed leaves 3 to 8 inches long, and bright-yellow flowers 2 to 4 inches across. It is native to the eastern part of North America, extending west to Wisconsin and Arkansas.

91630. OXALIS ROSEA Feuill. Oxalidaceae. Rose oxalis.

No. 21906. A tall leafy-stemmed herbaceous perennial with notched leaflets and open irregularly forked axillary cymes of rosy flowers having deeper-colored veins. Native to Chile.

91631. KNIPHOFIA HYBRIDA Hort. Liliaceae. Torchlily.

No. 25385. Variety *Mirabilis*.

91632 and 91633.

From India. Seeds purchased from G. Ghose & Co., Townend, Darjeeling. Received February 20, 1931.

91632. LILIUM OCHRACEUM Franch. Liliaceae. Lily.

A rare and beautiful lily from Burma, not hardy except in the most favored districts; it is an admirable cool greenhouse plant. This is a very variable species, producing flowers which range in color from deep golden yellow to pale yellow, stained in varying degrees with deep wine-purple.

For previous introduction see 75729.

91633. LILIUM WALLICHIANUM Schult. f. Liliaceae. Wallich lily.

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long and usually solitary creamy waxy white fragrant flowers 9 inches long, which are golden yellow at the base inside and green outside.

For previous introduction see 90013.

91634 to 91638. DIOSPYROS KAKI L. f. Diospyraceae. Kaki persimmon.

From Japan. Scions presented by Kimijiro Noro, Shizuokaken Agricultural Experiment Station, Toyoda Mura, near Shizuoka. Received February 21, 1931.

91634. *Fuyu.*

91635. *Gionbo.*

91634 to 91638—Continued.

91636. *Jiro.*

91637. *Saijo.*

91638. *Yokong.*

91639. (Undetermined.)

From Papeite, Tahiti, Society Islands. Plants received from L. Garnier, through John Bryant, Jardin des Plantes, Papeite. Received February 21, 1931.

This bamboo is understood to be a very long-jointed species from a mountainous locality in Tahiti. A beautiful ribbon fiber up to 3 feet long, and used in making fine baskets and other articles, is produced from the internodes, according to Edwin Peace, a former resident of Tahiti. Like many other bamboos, the plants received produce three primary branches at a node, the middle branch being a little the largest; later numerous additional small branches are put out from the node. The lanceolate leaves on the plants received are up to 11 inches long by 1½ inches wide and are pubescent beneath. They have 8 to 11 pairs of secondary veins with 5 to 7 intermediates.

91640 to 91647.

From Tunisia, Africa. Scions presented by André H. Petitpierre, Direction Générale de l'Agriculture du Commerce et de la Colonisation, Tunis, northern Africa. Received February 24, 1931.

91640 to 91643. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

91640. *Gros Indigène.*

91641. *Luizeb-Bouchoi.*

91642. *Oblong.*

91643. *Senadgui.*

91644 to 91647. VITIS VINIFERA L. Vitaceae. European grape.

91644. *Benzerti.*

91645. *Bezoub el Khadem.*

91646. *Bidh el Hamay.*

91647. *Osli.*

91648. TRIFOLIUM PRATENSE L. Fabaceae. Red clover.

From Toronto, Canada. Seeds purchased from William Rennie Co. (Ltd.). Received February 24, 1931.

Red clover grown in York County, Province of Ontario, within 50 miles of Toronto.

91649 and 91650.

From Morocco. Seeds presented by H. Brayard, Ingénieur Horticole, Directeur de la Ferme Expérimentale, Marrakech. Received February 25, 1931.

91649. MEDICAGO SATIVA L. Fabaceae. Alfalfa.

Luzerne de Demnat.

91650. ARGANIA SPINOSA (L.) Skeels (*A. sideroxylon* Roem. and Schult.). Sapotaceae. Argan.

The *argan* tree of western Morocco is very limited in its range, occurring only in that part of the African Continent. It grows to a large size and bears an abundance of light-yellow fruits somewhat resembling small plums in shape. Cattle

91649 and 91650—Continued.

and goats feed upon these fruits, which are exceedingly acrid. The seeds are very thick-walled and contain an oil which is used as food and also for illuminating purposes. Apparently the tree is not injured by considerable frost, and it may thrive wherever the hardy citrus grows.

For previous introduction see 88935.

91651. ZEA MAYS L. Poaceae.

From French Equatorial Africa. Seeds presented by Elizabeth Herrmann, Alindao, Ubangi Chari Territory. Received February 26, 1931.

A white corn which matures in two months. The natives plant it near swamps at the beginning of the dry season, and in the rainy season they plant it in stony ground near the fertile ant hills. It yields two ears in good ground, but only one in less fertile situations.

91652. FORSTERONIA FLORIBUNDA (Swartz) A. DC. Apocynaceae.

From Jamaica. Seeds presented by M. S. Goodman, Superintendent, Hope Gardens, Kingston. Received February 26, 1931.

A trailing shrub with oblong, bluntly mucronate, leathery leaves 2 to 3 inches long, and terminal cymes of whitish wheel-shaped flowers. It is native to Jamaica and is of possible value as a rubber-producing plant.

For previous introduction see 90831.

91653. CHLORIS PARAGUAIENSIS Steud. Poaceae. **Grass.**

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, Director, Agricultural Experiment Station. Received March 5, 1931.

A close relative of Rhodes grass. A very good, palatable grass that withstands extreme drought.

For previous introduction see 49689.

91654. PRUNUS sp. Amygdalaceae.

From Rabat, Morocco. Scions presented by C. Bey Rozet, Direction Générale de l'Agriculture. Received February 27, 1931.

Belciana. A precocious and vigorous variety of plum which thrives in the coastal region, is harvested the latter part of May, and is a good shipper.

91655. GUNNERA MASAFUERAE Skottsb. Haloragidaceae.

From Juan Fernandez Island. Seeds presented by Señor René Durand, through Waldo L. Schmitt, Curator of Marine Invertebrates, Smithsonian Institution, Washington, D. C. Received February 27, 1931.

A perennial herb with large, deeply cut, radicle leaves often 10 feet long, the petioles of which are edible, having a refreshing acid flavor. The flowers are closely packed in large conelike clusters 1 foot in diameter and several feet high. It is native to the island of Juan Fernandez at an altitude of 3,500 feet.

91656 to 91671.

From Quetta, India. Trees and cuttings purchased from the Quetta Fruit Agency. Received February 27, 1931.

91656 to 91671—Continued.

91656 to 91660. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

91656. A locally grown variety with round fruit colored red and white.

91657. Long, almondlike, the best.

91658. A locally grown variety with long red and white fruit.

91659. *Kandahari.*

91660. A grafted peach.

91661. PISTACIA VERA L. Anacardiaceae. **Pistache.**

Thin shelled; best variety.

91662 to 91665. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

91662. A locally grown red variety.

91663. *Ghaizi nari.*

91664. *Char naghaz.*

91665. *Sur baghli.* A locally grown white apricot with a red tinge.

91666 to 91671. VITIS VINIFERA L. Vitaceae. **European grape.**

91666. *Sahibi.* A red grape.

91667. *Red Kishmishie.* A seedless grape.

91668. *Haitha,* Kandhar variety, a long white grape with seeds.

91669. *Sheik Ali.*

91670. Long, black.

91671. *Kishmishie.* A seedless white grape.

91672 to 91677. TRITICUM TURGIDUM L. Poaceae. **Poulard wheat.**

From Huancayo, Peru. Seeds presented by Paul G. Ledig, Magnetic Observatory, Carnegie Institution of Washington, Department of Research in Terrestrial Magnetism. Received February 27, 1931.

91672 and 91673. From Muellos, Peru, at 12,000 feet altitude.

91672. No. 5.

91673. No. 4.

91674 to 91677. From Chambora, Peru, at a slightly less altitude.

91674. No. 6. **91676.** No. 3.

91675. No. 1. **91677.** No. 2.

91678 to 91734. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Chosen and Manchuria. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received February 27, 1931.

Nos. 91678 to 91729 were received from the Heian Nando Seed & Nursery Farm, Heijo, Chosen, January 27, 1931.

91678. No. 6708. *Kakkaichuomi.* A mixture of yellow-seeded native varieties.

91679. No. 6709. *Ryumokute* (dragon's eye). A medium-sized oval light-yellow bean slightly mottled with black; hilum black.

91678 to 91734—Continued.

91680. No. 6710. *Seita* (light-blue). A mixture of native varieties varying from yellow to greenish yellow.

91681. No. 6711. *Purukon* (roasted bean). A medium-sized oval slightly flattened seal-brown bean; used roasted.

91682. No. 6712. *Porinkon.* A medium-sized oval slightly flattened green bean with pale hilum and green germ.

91683. No. 6713. *Ajigerikon.* A medium-sized oval slightly flattened bean, mottled with yellow and black.

91684. No. 6714. *Porikon* (millet fried bean). A large oval light-yellow bean with the testa more or less cracked; hilum light brown.

91685. No. 6715. *Purukon.* A medium-sized oval green bean with brown hilum and green germ.

91686. No. 6716. *Kikkazu* (chrysanthemum bean). A medium-sized oval yellow bean with brown hilum.

91687. No. 6717. *Wanita* (dragon's eye). A medium-sized oval slightly flattened glossy yellow bean with slate-black hilum which is rather long and narrow.

91688. No. 6718. *Aoshoryu.* A medium-small oval slightly flattened greenish-yellow bean with brown hilum and yellow germ.

91689. No. 6719. *Kaisen purukon.* A medium-large oval slightly flattened black and brown bean.

91690. No. 6720. *Chuinunikon.* A small nearly round black bean with yellow germ.

91691. No. 6721. *Kaisen horebikon.* A medium-sized nearly round light-yellow bean with pale hilum.

91692. No. 6722. *Chonkon.* A medium-sized oval slightly flattened green bean with light-brown hilum and green germ.

91693. No. 6723. *Iruchontari.* A medium-sized oval black bean with yellow germ.

91694. No. 6724. *Ankechaji.* A medium-small oval light-yellow bean with pale hilum.

91695. No. 6725. *Kokuzu.* A medium-sized oval slightly flattened black bean with yellow germ.

91696. No. 6726. *Hakutaotsu.* A medium-sized oval light-yellow bean with pale hilum.

91697. No. 6727. *Kanmokuta.* A medium-sized oval yellow bean, more or less mottled with brown; hilum dark brown.

91698. No. 6728. *Ryumokute* (dragon's eye). A medium-sized oval yellow bean with black hilum.

91699. No. 6729. *Purute.* A medium-sized oval slightly flattened green bean with brown hilum and green germ.

91700. No. 6730. *Himashita* (castor-bean). A medium-sized nearly round brown bean marked with black in concentric rings.

91701. No. 6731. *Iruchontate.* A medium-sized oval yellow bean with dark-brown hilum.

91678 to 91734—Continued.

91702. No. 6732. *Awata* (millet bean). A medium-large oval light-yellow bean with pale hilum.

91703. No. 6733. *Komuzomkon.* A medium-large much-flattened green and black bean, very similar to No. 2199.

91704. No. 6734. *Pottakukon.* A medium-small oval very light-yellow bean with pale hilum.

91705. No. 6735. *Hakuta Orukon.* A medium-sized oval yellow bean with a pale hilum; used for bean curd.

91706. No. 6736. *Chumokuta* (mouse eye). A mixture of reddish-brown and olive-brown varieties.

91707. No. 6737. *Oruchankon.* A medium-small nearly round greenish-yellow bean with brown hilum.

91708. No. 6738. *Teihata.* A medium-sized oval glossy yellow bean, more or less mottled with brown; hilum brown.

91709. No. 6739. *Oruchankon.* A medium-small oval light-yellow bean, mottled with brown; hilum brown.

91710. No. 6740. *Chonchuinunikon.* A medium-small nearly round light-green bean with reddish-brown hilum and green germ.

91711. No. 6741. *Angechiijichankon.* A very small oval slightly flattened yellow bean, heavily mottled with brown; hilum brown.

91712. No. 6743. *Chongepikon.* A medium-large oval green bean with brown hilum and green germ.

91713. No. 6742. *Wanta.* A large nearly round glossy yellow bean with light-brown hilum.

91714. No. 6744. *Chanpurukon.* A very small nearly round light-brown bean, very similar to Brownie, No. 17256.

91715. No. 6745. *Purukon.* A medium-sized oval slightly flattened glossy yellowish-brown bean.

91716. No. 6746. *Jisante.* A large oval glossy yellow bean with light-brown hilum.

91717. No. 6747. *Chuinunikon.* A medium-small oval slightly flattened black bean, very similar to Ebony, No. 17254.

91718. No. 6748. *Budome* (grape eye). A medium-sized oval glossy yellow bean with pale slate-colored hilum.

91719. No. 6749. *Shirodaidzu* (white bean). A medium-sized oval glossy yellow bean with pale hilum.

91720. No. 6750. *Ryumokute* (dragon's eye). A medium-sized oval glossy yellow bean, more or less mottled with brown; hilum brown.

91721. No. 6751. *Pudokuton.* A medium-sized oval yellow bean with brown hilum.

91722. No. 6752. *Kokaita.* A mixture of glossy yellow beans with black and brown hilums.

91723. No. 6753. *Ryokudaizu* (blue bean). A medium-large oval green bean with light slate-black hilum and green germ.

91724. No. 6754. *Chumokuzu* (mouse eye). A small nearly round black bean with yellow germ.

91678 to 91734—Continued.

91725. No. 6755. *Akazu* (red bean). A medium-sized oval seal-brown bean with yellow germ.

91726. No. 6756. *Usouseita* (crow's early bean). A medium-sized bluish-green nearly round bean with black hilum and yellow germ.

91727. No. 6757. *Komujomukon.* A medium-sized oval slightly flattened black bean with yellow germ.

91728. No. 6758. *Chuikon.* A very small nearly round light-brown bean, very similar to Brownie, No. 17256.

91729. No. 6759. *Kokaita.* A medium-sized oval greenish-yellow bean with brown hilum.

Nos. 91730 to 91734 were obtained at Kungchuling, Manchuria, January 30, 1931; mixed samples of yellow-seeded varieties from various sources, graded by the Grade Conference of the South Manchurian Railway, in December, 1930.

91730. No. 6767. *Excellent, Grade No. 1,* used for soy sauce and miso.

91731. No. 6768. *Grade No. 1.*

91732. No. 6769. *Grade No. 2.*

91733. No. 6770. *Grade No. 3.*

91734. No. 6771. *Grade No. 4.*

91735 to 91742.

From Medellin, Colombia, South America. Seeds presented by Dr. W. A. Archer, Escuela de Agricultura. Received February 28, 1931.

91735. CIPURA PALUDOSA Aubl. Iridaceae.

No. 5. Collected November 9, 1930, at Medellin. A beautiful dwarf bulbous plant with narrow lanceolate grasslike leaves 12 to 15 inches high. The light-blue flowers, not over 1 inch in diameter, are similar in color to those of *Iris pallida dalmatica.* It is native to the Guianas.

For previous introduction see 37877.

91736. IPOMOEA sp. Convolvulaceae. **Morning-glory.**

No. 1. Collected at Medellin, November 9, 1930. A dwarf morning-glory 3 to 4 feet high, with blue flowers.

91737. MERIANIA NOBILIS Triana. Melastomaceae.

No. 7. *Amarrobolla.* Collected at Santa Elena, December 28, 1930. A large tree with large purplish blossoms which are very handsome.

91738. (Undetermined.)

No. 9. *Lirio virginal.* Collected December 28, 1930, at Santa Elena. Aerial bulbils borne on the flower stalk of a liliaceous plant. The flowers are said to be white and to look like a lily.

91739. (Undetermined.)

No. 6. *Cortapico.* Collected at Santa Elena, December 28, 1930. A climbing plant which grows 20 feet high. The flowers are pale yellow with purple spots and dark reddish sepals.

91740. (Undetermined.)

No. 2. A terrestrial orchid, collected at Santa Elena, December 26, 1930.

91735 to 91742—Continued.

91741. (Undetermined.)

No. 3. *La Sierra.* A terrestrial orchid, collected at Medellin, January 4, 1930.

91742. (Undetermined.)

No. 4. A terrestrial orchid, collected at Santa Elena in October, 1930.

91743. (Undetermined.)

From Indo-China. Seeds presented by the Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 28, 1931.

Collected near Laokay between 4,500 and 6,000 feet altitude. A handsome saponaceous tree 45 to 60 feet high, with golden foliage.

91744. CASTANOPSIS TRIBULOIDES (J. E. Smith) A. DC. Fagaceae.

From India. Seeds presented by R. N. Parker, Forest Botanist, Dehra Dun, United Provinces. Received March 2, 1931.

An evergreen chinquapin from the subtropical Himalayas, with small narrow leaves and solitary nuts. The tree is usually 40 to 60 feet high. The bark is said to yield a relatively large amount of tannin.

For previous introduction see 71030.

91745 to 91760.

From the West Indies. Seeds presented by the Allison V. Armour expedition to Mexico and the West Indies, 1931, through J. H. Kempton, Bureau of Plant Industry. Received March 2, 1931.

Nos. 91745 to 91747 were collected at the Harvard Botanic Garden, Soledad, Cienfuegos, Cuba, February 10, 1931.

91745. BOTOR TETRAGONOLOBA (L.) Kuntze (*Psophocarpus tetragonolobus* DC.). Fabaceae. **Goa bean.**

No. 9132. A summer vegetable with winged pods, which are eaten like string beans. The seeds are also eaten after the pods are too tough to use. This plant produces its seeds in the summer after the other beans have matured.

For previous introduction see 74529.

91746. CHRYSALIDOCARPUS MADAGASCARIENSIS Beccari (*Dypsis madagascariensis* Hort.). Phoenicaceae. **Palm.**

No. 9126. A graceful palm, native to Madagascar, about 15 feet high, with pinnate leaves 10 feet long, having the segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see 81511.

91747. HIBISCUS SORORIUS L. Malvaceae.

No. 9111.

For previous introduction and description see 90919.

91748 to 91758. GOSSYPIUM spp. Malvaceae. **Cotton.**

Nos. 91748 to 91753 were collected February 11, 1931, on Grand Cayman, Cayman Islands.

91748. GOSSYPIUM sp.

No. 9138. A variety with green fuzz.

91745 to 91760—Continued.

91749. GOSSYPIUM sp.

No. 9140. Smooth seeds.

91750. GOSSYPIUM sp.

No. 9142.

91751. GOSSYPIUM sp.

No. 9143.

91752. GOSSYPIUM sp.

No. 9144. A form with petal spot.

91753. GOSSYPIUM sp.

No. 9145.

Nos. 91754 and 91755 were collected at Nassau, New Providence Island, the Bahamas, February 2, 1931.

91754. GOSSYPIUM sp.

No. 9102.

91755. GOSSYPIUM sp.

No. 9103.

91756. GOSSYPIUM sp.

No. 9107. Collected at Guantanamo, Cuba, February 6, 1931. A cotton which has evidently escaped from cultivation.

Nos. 91757 and 91758 were collected February 8, 1931, at Soledad, Cuba.

91757. GOSSYPIUM sp.

No. 9109. A shrub 10 to 12 feet high with no petal spot, and light-yellow flowers. It is probably a hybrid between *Gossypium hirsutum* and *G. barbadense* and was, perhaps, brought to Cuba from Trinidad by Germans in 1861.

91758. GOSSYPIUM sp.

No. 9110. A shrub 12 feet high which produces brown cotton.

91759. LUCUMA sp. Sapotaceae.

No. 9139. Collected on Grand Cayman Island, February 11, 1931. Said to have smooth fruit with yellow flesh.

91760. ZEA MAYS L. Poaceae. **Corn.**

No. 9141. Collected on Grand Cayman Island, February 11, 1931.

91761 to 91763. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Oporto, Portugal. Plants presented from Alfredo Moreira de Silva & Filhos, nurserymen. Received March 3, 1931.

91761. *Teton de Venus.*

91762. *Madeleine de Courson.*

91763. *Grosse Mignone.*

91764. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

From Indo-China. Seeds presented by the Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received March 3, 1931.

Mandarin oranges of very good quality from the region of Laokay and Hanoi.

91765 to 91770. DIGITARIA spp. Poaceae. **Grass.**

From South Africa. Plants presented by I. B. Pole Evans, Chief, Division of Plant Industry, Department of Agriculture, Pretoria, Union of South Africa. Received March 3, 1931.

Forms of perennial grasses which are related to the woolly fingergrass (*Digitaria eriantha stolonifera*). They are to be tested as winter forage for stock in dry regions.

91765. DIGITARIA PENTZII Stent.

91766. DIGITARIA LITTORALIS PROSTRATA Stent.

91767. DIGITARIA DECUMBENS Stent.

91768. DIGITARIA POLEVANSII Stent.

91769. DIGITARIA SWAZILANDENSIS Stent.

91770. DIGITARIA VALIDA Stent.

91771 to 91785. Phoenicaceae. **Palm.**

From the West Indies. Seeds presented by the Allison V. Armour expedition to Mexico and the West Indies, 1931, through J. H. Kempton, Bureau of Plant Industry. Received March 3, 1931.

Collected in the Harvard Botanic Garden, Soledad, Cienfuegos, Cuba, February 10, 1931.

91771. ARECA sp.

No. 9136. Received as *Actinorhytis calapparia*, but the seeds do not agree with other material of that species. To be grown for identification.

91772. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude.

No. 9128. A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long, of lanceolate, usually entire leaflets 1 to 2 feet long and whitish beneath. The greenish-yellow flowers are borne in a cluster about 1 foot long and are followed by small round fruits. Native to Queensland, Australia.

For previous introduction see 81582.

91773 and 91774. ARECASTRUM ROMANZOFFIANUM (Cham.) Becc. (*Cocos romanzoffiana* Cham.).

A palm, native to Brazil, with an unarmed trunk about 30 feet high and 1 foot in diameter, bearing a crown of plumelike leaves 12 to 15 feet long. The fruit is a pale-orange drupe about the size of a large acorn, inclosing a bony seed which has three eyes near the base.

For previous introduction see 81687.

91773. No. 9121.

91774. No. 9135.

91775. ARIKURYROBA SCHIZOPHYLLA (Mart.) Bailey (*Cocos schizophyllus* Mart.).

No. 9127. A slender straight-stemmed pinnate-leaved palm.

91776. BUTIA ERIOSPATHA (Mart.) Becc. (*Cocos eriospatha* Mart.). **Apricot palm.**

No. 9129. A handsome pinnate-leaved palm with violet-colored stems, creamy flowers, and edible yellow fruits the size of a small plum. It is native to Brazil.

For previous introduction see 73923.

91771 to 91785—Continued.

91777. CARYOTA URENS L. **Toddy palm.**

No. 9122. A Malayan palm up to 80 feet high and 18 inches in diameter, with twice pinnately divided leaves 20 feet long by 12 feet wide, and the segments are curved and drooping.

For previous introduction see 77157.

91778. CHRYSALIDOCARPUS LUTESCENS (Bory) Wendl. **Yellow palm.**

No. 9125. A spineless stoloniferous palm up to 30 feet high, native to Madagascar. The pinnate leaves are about 5 feet long, and the fruits are violet or almost black.

For previous introduction see 81585.

91779. HETEROSPATHE ELATA Scheff.

No. 9131. A tall unarmed palm with straight slender stem and long pinnate leaves, growing in protected situations where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house palm.

For previous introduction see 88117.

91780. PTYCHOSPERMA MACARTHURI Wendl. (*Kentia macarthuri* Hort.).

No. 9137. A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation and suckers from the base, making a bushy plant. The smooth ringed trunk is crowned by a dense cluster of pinnate leaves with arching leaflets 6 to 9 inches long.

For previous introduction see 80190.

91781. LICUALA SPINOSA Thunb.

No. 9130.

For previous introduction and description see 90923.

91782. LIVISTONA CHINENSIS (Jacq.) R. Br. **Chinese fan palm.**

No. 9120.

For previous introduction and description see 91524.

91783. LIVISTONA HOOGENDORPII Andre.

No. 9124. A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles 3 to 5 feet long, red-brown at the base and becoming olive green near the leaf. The leaves are made up of 10 to 12 plicate, pendulous segments with five to seven acute lobes at the apex.

For previous introduction see 88121.

91784. TILMIA CARYOTAEFOLIA (H. B. K.) O. F. Cook (*Martinezia caryotaefolia* H. B. K.).

No. 9134. A beautiful slender straight-stemmed spiny-trunked palm with bright orange-scarlet fruits borne in drooping racemes.

For previous introduction see 88136.

91785. SYAGRUS FLEXUOSA (Mart.) Becc. (*Cocos flexuosa* Mart.).

No. 9123. A low Brazilian palm, 9 to 12 feet high, with lax terminal pinnate leaves 3 to 6 feet long, having 70 to 90 pairs of rigid leaflets.

For previous introduction see 71406.

91786 to 91791.

From China. Seeds from the Botanic Garden, Hong Kong, presented through Prof. J. G. Jack, Arnold Arboretum, Jamaica Plain, Mass. Received March 5, 1931.

91786. MIMOSA SEPIARIA Benth. Mimosaceae.

A shrub or small tree with bipinnate leaves made up of four to eight pinnae, each bearing 20 to 40 linear leaflets one-fourth of an inch long. The small white flowers are borne in large lax panicles. It is native to Brazil.

91787. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.) Myrtaceae. **Lemon bottlebrush.**

An evergreen shrub up to 12 feet high with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. Native to southeastern Australia.

For previous introduction see 78532.

91788. CRYPTOMERIA JAPONICA (L. f.) D. Don. Pinaceae. **Common cryptomeria.**

A beautiful Japanese evergreen tree, growing to a height of 300 feet and attaining a diameter of 7 feet. It will withstand considerable frost.

For previous introduction see 43837.

91789. ALTINGIA CHINENSIS (Champ.) Oliver (*Liquidambar chinensis* Champ.). Hamamelidaceae.

A tall tree with coriaceous oblong-ovate glandular-serrate leaves 3 to 4 inches long and inconspicuous flowers. It is native to Hong Kong.

91790. PINUS MASSONIANA Lambert. Pinaceae. **Pine.**

A tall tree up to 80 feet high with spreading branches and yellowish brown branchlets. The thin slender light-green leaves are 5 to 8 inches long, and the dull-brown ovate cones are 3 to 5 inches long. It is a native to southern China.

For previous introduction see 53849.

91791. SAPIUM SEBIFERUM (L.) Roxb. Euphorbiaceae. **Chinese tallowtree.**

An attractive, long-lived Chinese tree which reaches a height of 40 to 50 feet and a diameter of 5 to 6 feet. The 3-celled flattened-ovoid fruits, three-fifths of an inch in diameter, are covered with a fatty substance, which the Chinese remove by steaming and rubbing through a bamboo sieve. After the fat is removed the seeds are crushed and an oil is expressed which is used in the manufacture of candles and soap. It is occasionally grown as a shade tree in the Gulf and South Atlantic States.

For previous introduction see 75262.

91792. PRUNUS DOMESTICA L. Amygdalaceae. **Prune.**

From Chevy Chase, Md. Scions presented by Dr. A. Hrdlička, United States National Museum. Received March 4, 1931.

This prune, received from Czechoslovakia by Doctor Hrdlička, appears very similar to the French prune in character of fruit, but the latter does not succeed in the climate of Washington, whereas Doctor Hrdlička's tree bears well annually, and the fruit seems

91792—Continued.

almost immune to the attacks of curculio and other pests. The ripening season is September and October.

For previous introduction see 60973.

91793 to 91835.

From Scotland. Seeds presented by W. Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. Received February 26, 1931.

91793. AGAPANTHUS AFRICANUS (L.) Hoffmannsegg (*Abumon africanum* Britton). Liliaceae.

Variety *caulescens*. A form with long-pediceled blue flowers paler inside, and the outer flowers of the umbel nodding.

91794 to 91801. ALLIUM spp. Liliaceae. Onion.

91794. ALLIUM ATTENUIFOLIUM Kellogg.

A bulbous perennial with a slender scape 6 to 15 inches high, channeled leaves, and a dense umbel of nearly white rose-tinted flowers. It is native to California.

91795. ALLIUM LIBANI Boiss.

A species with very narrow leaves and a dense umbel of straw-colored flowers. It is about 4 inches high and grows wild in the mountains of southern Palestine.

For previous introduction see 59348.

91796. ALLIUM OREOPHILUM Meyer.

A bulbous perennial with linear to lanceolate leaves and hemispheric umbels of purple-lavender flowers. It is native to the mountains of the Caucasus.

91797. ALLIUM PARADOXUM (Bieb.) Don.

A perennial onion, 1 foot high, with white flowers. Native to Siberia.

For previous introduction see 78989.

91798. ALLIUM PULCHELLUM Don.

For previous introduction and description see 90947.

91799. ALLIUM ROSEUM L.

A plant about 1 foot high, with strap-shaped leaves rolled inward at the top and pale lilac-rose flowers produced in umbels. Native to southern Europe.

For previous introduction see 81101.

91800. ALLIUM SIKKIMENSE Baker.

For previous introduction and description see 91276.

91801. ALLIUM WALLICHIANUM Steud.

A tall, eastern Asiatic onion, with narrow flat leaves about 3 feet long and purple flower heads.

For previous introduction see 66435.

91802. ALSTROEMERIA HAEMANTHA Ruiz and Pav. Amaryllidaceae.

A tuberous-rooted perennial with a flower stem 2 to 3 feet high, bearing thin lanceolate leaves 3 to 4 inches long and a compound umbel of flowers 2 inches long which are bright red tipped with green, the inner ones with red-purple spots on a red-yellow ground. It is native to Chile.

91793 to 91835—Continued.

91803. ALSTROEMERIA REVOLUTA Ruiz and Pav. Amaryllidaceae.

A tuberous-rooted perennial, native to Chile, with a stem 1 foot high, crowded linear leaves 1 to 2 inches long, and 6 to 12 purplish flowers 1 inch long with the segments recurved half their length, the inner ones spotted white.

91804. COMMELINA SIKKIMENSIS C. B. Clarke. Commelinaceae. Dayflower.

A slender, creeping, herbaceous perennial, rooting at the nodes, with lanceolate leaves 2 to 3 inches long and blue flowers. It is native to the Province of Sikkim, India.

91805 to 91807. CRASSULA spp. Crassulaceae.

91805. CRASSULA NUDICAULIS L.

A nearly stemless succulent with the semiterete, lanceolate leaves, 2 to 6 inches long, in a rosette, and the flower stem, 1 to 2 feet high, bearing dense headlike clusters of small greenish flowers. It is native to southern Africa.

91806. CRASSULA ORBICULARIS L.

A succulent, native to southern Africa, producing offsets and runners. The spatulate-obovate leaves, with cartilaginously ciliate margins, spread horizontally and are imbricated, forming a circular rosette. The peduncle, 6 to 8 inches high, bears three to five pairs of clusters of small creamy white flowers.

91807. CRASSULA TENUIFOLIA Schoenl.

A diffuse succulent, 8 to 12 inches high, with linear leaves 1 inch long and corymbs of small white flowers. It is native to Natal.

91808. DRACOCEPHALUM ISABELLAE Forrest. Menthaceae. Dragonhead.

A perennial, mintlike plant 12 to 18 inches high, native to China, with leaves 1 inch long, divided into five to seven linear segments and spikes 4 to 5 inches long made up of verticillate clusters of dragon-shaped, deep blue-purple flowers 1 to 2 inches long.

91809. DRACOCEPHALUM RUPRECHTI Regel. Menthaceae. Dragonhead.

A dwarf compact perennial 1 to 2 feet high, with ovate-lanceolate incised and toothed leaves and axillary clusters of rose-purple to lilac tubular 2-lipped flowers 1 inch long. It is native to Turkestan.

91810 to 91813. ECHEVERIA spp. Crassulaceae.

91810. ECHEVERIA ALPINA Hort.

A name for which a place of publication and description has not been found.

91811. ECHEVERIA CUSPIDATA Rose.

A stemless succulent with a dense rosette of glaucous red-tinged obovate leaves 2 to 3 inches long and rose-colored flower stalks 12 to 18 inches high bearing secund racemes of purple flowers with yellow tips. It is native to Mexico.

91812. ECHEVERIA GRACILIS Hort.

A name for which a place of publication and description has not been found.

91793 to 91835—Continued.

91813. ECHEVERIA PULCHELLA Berger.

A small fleshy succulent, spreading by means of rhizomes, with a rosette of 20 to 50 ovate leaves and a flower stalk 12 to 18 inches high, bearing light-red campanulate flowers half an inch long.

91814 and 91815. ERICA VAGANS L. Ericaceae. **Cornish heath.**

A low shrub, native to Europe, 1 foot or more high, with the leaves in whorls of four or five and bearing pale purplish-red flowers.

For previous introduction see 85854.

91814. *Kevernensis* or *St. Keverne.* A variety with large flower trusses of clear rose pink without a shade of blue.

91815. *Leucantha.* A white-flowered form.

91816 to 91818. ESCALLONIA spp. Escalloniaceae.

91816. ESCALLONIA VIRGATA (Ruiz and Pav.) Pers. (*E. philippiana* Masters).

An evergreen bush with an abundance of fragrant white flowers borne in the summer. Native to Peru.

91817. ESCALLONIA PTEROCLADON Hook.

A shrub of erect growth, 6 to 10 feet high, with white flowers borne on long spikes. It is native to southern Argentina.

For previous introduction see 78343.

91818. ESCALLONIA PUNCTATA DC.

A very scarce shrub, 4 to 5 feet high, with neat evergreen foliage and bright-red flowers which are distinct from all others. It is native to Chile.

For previous introduction see 78345.

91819. FUCHSIA BACILLARIS Lindl. Onagraceae.

A shrub up to 10 feet high, with short-jointed branches, lanceolate to elliptic leaves 2 to 4 inches long, and small drooping flowers with rosy flaring mouths. It is native to Mexico.

91820. HEMEROCALLIS PLICATA Hort. Liliaceae. **Daylily.**

A perennial herb with linear leaves and large lilylike orange flowers.

For previous introduction see 85857.

91821. IRIS SINTENISII Janka. Iridaceae.

A beardless iris of the same general type as *Iris graminea,* with tufted evergreen leaves about 12 inches long and flower stalks little higher than the leaves. The flowers are blue purple, with red purple on the style branches and hafts. Native to southeastern Europe and Asia Minor.

For previous introduction see 78863.

91822. KALANCHOE BENTII C. H. Wright (*K. teretifolia* Deflers, not Haw.). Crassulaceae.

A succulent with dull olive-green stems about 3 feet high, thick fleshy spreading and recurved terete leaves 3 to 6 inches long, and panicles of erect tubular white flowers half an inch long, the buds being pink. It is native to Arabia.

91793 to 91835—Continued.

91823. OPHIOPOGON INTERMEDIUS D. Don. Liliaceae.

A hardy perennial, indigenous to Ceylon, with grasslike leaves and white flowers. It reaches a height of about 1 foot and is suited to moist shady places.

For previous introduction see 47743.

91824. OPHIOPOGON JABURAN (Siebold) Lodd. Liliaceae. **Jaburan.**

A stemless Japanese perennial belonging to the lily family, with a stoloniferous rhizome and erect narrowly linear leaves about 2 feet high. The flowers, varying in color from white to lilac, are in racemes 3 to 6 inches long, borne on a scape up to 2 feet high. It is likely to prove tender for outside growing in the northern United States.

For previous introduction see 62288.

91825. ORNITHOGALUM ECKLONII Fisch. and Mey. Liliaceae.

A bulbous perennial, native to tropical and southern Africa, with linear leaves 12 to 18 inches long, a slender flower stalk as high as the leaves, and a dense raceme 4 to 6 inches long of pure white flowers keeled with green.

91826. PASSIFLORA EDULIS Sims. Passifloraceae. **Purple granadilla.**

This passionflower is extensively grown in Australia and thrives in the warmer portion of the United States, although not well known. The fruit is the size and shape of an egg, and contains a pulp of exceedingly good flavor; the pulp is eaten with a spoon after cutting off one end of the fruit. The pulp is also used as a flavoring for cakes, ice cream, and drinks, and in fruit salads. The vine grows well in any ordinary soil with abundant fertilizer. The rich-green foliage is very ornamental.

For previous introduction see 49475.

91827. PASSIFLORA SUBEROSA L. Passifloraceae. **Cork passionflower.**

Several of the small-fruited passifloras are valued as ornamental plants, and this woody climber from the West Indies is one of the little-known species which properly comes under that class. The flowers are greenish yellow, and the fruit is a small ovoid berry. Coming from the Tropics, this vine will probably endure little or no frost.

For previous introduction see 60312.

91828. PAVONIA SPINIFEX (L.) Cav. Malvaceae.

A slender shrub, sometimes 20 feet high, with hairy oval heart-shaped leaves and handsome large yellow flowers. It is native to southern South America, and yields a fiber said to be of fine texture and excellent quality.

For previous introduction see 64044.

91829. PRIMULA APOCLITA Balf. and Forr. Primulaceae. **Primrose.**

A Tibetan primrose of the section Muscarioides, with a rosette of papery oblong-spatulate leaves, and purplish blue flowers borne on a scape 6 inches high.

For previous introduction see 79097.

91793 to 91835—Continued.

91830. PRIMULA LEUCOPHYLLA Pax. Primulaceae. **Primrose.**

A stemless herbaceous perennial with coriaceous oblong to elliptic rugose leaves, densely white tomentose beneath, and scapes 4 to 8 inches high, bearing umbels of rather small yellow flowers. It is native to Austria.

91831. RUBUS LAMBERTIANUS Seringe. Rosaceae.

A bramble with long slender square evergreen stems, simple or 3-lobed to 5-lobed leaves, bright green above and lighter beneath, terminal clusters of small white flowers and red or yellow fruits. It is native to China.

91832. RUBUS PHOENICOLASIUS Maxim. Rosaceae. **Wineberry.**

A tall subscandent Japanese bramble with slender branches. The peduncles and calyxes are covered with close-set stiff red-purple hairs, which in the lower parts of the stem are glandless and mixed with slender straight or recurved prickles. The trifoliolate leaves are 5 to 7 inches long. The leaflets are green and glabrous above and covered with snow-white tomentum beneath. The small flowers have rose-pink petals and spreading, narrowly lanceolate red-purple sepals 1 inch long. The ovoid-oblong fruits are scarlet droops, three-fourths of an inch long and edible, but without much flavor.

For previous introduction see 52949.

91833. SYRINGA TOMENTELLA Bur. and Franch. (*S. adamiana* Balf. and Smith). Oleaceae. **Felty lilac.**

A bushy shrub, about 10 feet high, with elliptic leaves which are hairy beneath and loose long-branched spikes of fine mauve-pink flowers, produced in late May and early June. It is native to western China.

For previous introduction see 85863.

91834. SYRINGA YUNNANENSIS Franch. Oleaceae. **Yunnan lilac.**

A handsome shrub of open spreading growth, related to *Syringa wilsonii*, but with pale-pink flowers in large panicles, produced in June. The downy leaves have a distinct red midrib, the color being continued through the leafstalk. It is native to China.

For previous introduction see 85864.

91835. ZEPHYRANTHES VERECUNDA Herb. Amaryllidaceae. **Zephyrlily.**

A bulbous perennial with narrowly lanceolate leaves and funnel-shaped flowers, 1 to 2 inches long, greenish white, tinged with rose on the outside. It is native to the highlands of central Mexico.

91836 and 91837. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Algiers, Algeria, Africa. Seeds presented by Dr. René Maire, Jardin Botanique, University of Algiers. Received March 5, 1931.

Algerian-grown seed, introduced for the use of specialists who are trying to breed a variety immune from the eggplant wilt.

91836. *Aubergine longue violette.*

91837. No. 1588.

91838. VITIS VINIFERA L. Vitaceae. **European grape.**

From England. Cuttings presented by Fred J. Chittenden, Director, Royal Horticultural Society's Gardens, Wisley, Ripley, Surrey. Received March 5, 1931.

Princess of Wales.

91839 and 91840. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Quetta, India. Seeds purchased from the Quetta Fruit Agency. Received March 6, 1931.

91839. *Kandhari* or *herati* variety.

91840. A thin-shelled variety.

91841. BETA VULGARIS L. Chenopodiaceae. **Beet.**

From the Netherlands. Seeds presented through Dr. L. A. H. Peters, the Netherlands Legation, Washington, D. C. Received March 6, 1931.

Eureka. A variety used for stock feed.

91842. MESPILUS GERMANICA L. Malaceae. **Medlar.**

From Bulgaria. Seeds presented by J. G. Dickson, United States Department of Agriculture. Received March 6, 1931.

Collected in northwestern Bulgaria, October 26, 1930. This so-called wild apple is acrid and much like a quince until it turns brown, when it has a delicious flavor and aroma. It is collected by the natives and sold in the markets.

For previous introduction see 41803.

91843 and 91844. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Rabat, Morocco. Seeds presented by the Station de Selection et d'Essai de Semences. Received March 6, 1931.

Two varieties of soft wheat.

91843. No. 422.

91844. No. 335.

91845. PASPALUM FIMBRIATUM H. B. K. Poaceae. **Grass.**

From St. Croix, Virgin Islands. Seeds presented by J. B. Thompson, Director, Agricultural Experiment Station. Received March 6, 1931.

A grass which makes a thrifty growth under very dry conditions. It is less palatable than some other grasses, but stock eat it when pasturage is sparse. In the Virgin Islands it grows in mixture with other grasses and rarely if ever is seen to occupy the principal place in the grass flora.

91846 to 91945.

From Bulgaria. Seeds collected by J. G. Dickson, United States Department of Agriculture. Received March 9, 1931.

91846 to 91848. ABELMOSCHUS ESCULENTUS (L.) Moench. (*Hibiscus esculentus* L.). Malvaceae. **Okra.**

91846. No. 494.

91847. No. 495.

91848. No. 496.

91846 to 91945—Continued.

91849 to 91858. ALLIUM spp. Liliaceae.

91849 to 91855. ALLIUM CEPA L. Onion.

91849. No. 416. *Gorna orechowiza.*

91850. No. 417. *Gorna orechowiza.*

91851. No. 418. *Elechovo.*

91852. No. 497. Red, large.

91853. No. 498. Medium red.

91854. No. 499. Yellow medium.

91855. No. 500. Miscellaneous sets.

91856 and 91857. ALLIUM PORRUM L. Leek.

91856. No. 484.

91857. No. 490.

91858. APIUM GRAVEOLENS L. Apiaceae. Celery.

No. 493.

91859 and 91860. BETA VULGARIS L. Chenopodiaceae. Beet.

91859. No. 485. Egyptian beet.

91860. No. 486. A red beet.

91861 to 91870. BRASSICA OLERACEA CAPITATA L. Brassicaceae. Cabbage.

91861. No. 410. *Erfurtski.*

91862. No. 411. *Turski.*

91863. No. 412. Blue and white.

91864. No. 476. White.

91865. No. 477. White and blue.

91866. No. 478. Red.

91867. No. 479. Perfection early.

91868. No. 480.

91869. No. 481. White.

91870. No. 482. Curly.

91871 to 91891. CAPSICUM ANNUUM L. Solanaceae. Red pepper.

Collected at Pleven, Bulgaria.

91871. No. 400. Hardy, mixed.

91872. No. 422. Long, sweet.

91873. No. 423. Long, sweet.

91874. No. 424. Hot, small.

91875. No. 425. Hot, long.

91876. No. 426. Red, hot.

91877. No. 427. Long, hot.

91878. No. 428. Red, sweet.

91879. No. 429. Hot.

91880. No. 430.

91881. No. 431. Long, white, and sweet.

91882. No. 432. Sweet.

91883. No. 433. Sweet, long.

91884. No. 434. Red, sweet.

91885. No. 435. White, sweet.

91886. No. 436. Black, hot.

91887. No. 437.

91888. No. 438. Green.

91846 to 91945—Continued.

91889. No. 439.

91890. No. 440. Sweet.

91891. No. 441. Sweet.

91892 to 91900. CUCUMIS SATIVUS L. Cucurbitaceae. Cucumber.

91892. No. 401. Long.

91893. No. 402. Medium.

91894. No. 403. Sweet.

91895. No. 404. Long.

91896. No. 405. Russian.

91897. No. 406. Long.

91898. No. 407. Long.

91899. No. 408. Long.

91900. No. 409. Green, long.

91901. CUCURBITA PEPO L. Cucurbitaceae. Pumpkin.

No. 491.

91902 and 91903. DAUCUS CAROTA L. Apiaceae. Carrot.

91902. No. 413.

91903. No. 420.

91904 to 91906. LACTUCA SATIVA L. Chichoriaceae. Lettuce.

91904. No. 414. White.

91905. No. 415.

91906. No. 483. Curly.

91907 to 91919. LYCOPERSICON ESCULENTUM Mill. Solanaceae. Tomato.

91907. No. 442.

91908. No. 443. Round, medium early.

91909. No. 444. Early.

91910. No. 445. Medium early.

91911. No. 446. Early.

91912. No. 447. Medium early.

91913. No. 448. Medium early.

91914. No. 449. Ribbed.

91915. No. 450.

91916. No. 451. Round.

91917. No. 452. Early.

91918. No. 453.

91919. No. 454. Early curly.

91920 and 91921. PETROSELINUM HORTENSE Hoffm. Apiaceae. Parsley.

91920. No. 487. Leafy type.

91921. No. 488. Root type.

91922 to 91938. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

91922. No. 458.

91923. No. 459. Early.

91924. No. 460. White.

91925. No. 461. Yellow, sweet.

91926. No. 462. Black.

91927. No. 463. Black.

91928. No. 464. Black, sweet.

91929. No. 465.

91846 to 91945—Continued.

91930. No. 467.

91931. No. 468.

91932. No. 469. Yellow, sweet.

91933. No. 470. Black, sweet.

91934. No. 471. Black, sweet.

91935. No. 472. Mottled.

91936. No. 473. Mottled (raisin).

91937. No. 474. White.

91938. No. 475.

91939. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

No. 489. White.

91940 and 91941. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

91940. No. 419.

91941. No. 421.

91942. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

No. 492.

91943 to 91945. VICIA FABA L. Fabaceae. **Broadbean.**

91943. No. 455.

91944. No. 456.

91945. No. 457.

91946. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From Kompolt, Hungary. Seeds presented by the Seed Testing Station, through B. B. Robinson, Bureau of Plant Industry. Received March 9, 1931.

Fiber flax.

91947 and 91948.

From Narberth, Pa. Scions presented by A. E. Wohlert, The Garden Nurseries, through Paul Russell, Bureau of Plant Industry. Received March 9, 1931.

91947. PRUNUS CAMPANULATA Maxim. Amygdalaceae. **Taiwan cherry.**

A bushy tree up to 25 feet high, of upright-spreading habit, with bright shining-green serrate leaves. The campanulate pendulous single flowers are deep pink, opening before the leaves, and are succeeded by conical red fruits about three-fifths of an inch long. Native to Taiwan.

91948. PRUNUS SERRULATA Lindl. Amygdalaceae.

Variety *Jeanne Wohlert*. A decidedly dwarf variety, less than 6 feet high, with semidouble fragrant light-pink flowers.

For previous introduction see 72725.

91949 and 91950.

From Halle-Saale, Germany. Seeds presented by Dr. W. Nicolaisen, University of Halle. Received March 9, 1931.

91949. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

A variety immune from *Ustilago tritici*.

91950. AVENA SATIVA L. Poaceae. **Oats.**

A variety resistant to some physiological forms of smut.

91951 to 91956. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

From Peru. Seeds presented by M. E. Ochiozola, Chief, Estación Experimental Agrícola, Lima. Received March 9, 1931.

A collection of local strains which have been cultivated in different parts of Peru for a long period.

91951. No. 1. *Barba negra*. From Acobamba, Department of Huancavelica.

91952. No. 2. *Barba azul*. From Cerro de Pasco, Department of Junin.

91953. No. 3. *Chumpe blanco*. From Jauja, Department of Junin.

91954. No. 4. *Llagua*. From Huancayo, Department of Junin.

91955. No. 5. *Barba blanca*. From Arequipa, Department of Arequipa.

91956. No. 6. *Chumpe negro*. From Sicaya, Department of Junin.

91957 to 91960.

From Japan. Seeds purchased from The Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. Received March 9, 1931.

91957 to 91959. ACER spp. Aceraceae. **Maple.**

91957. ACER CARPINIFOLIUM Sieb. and Zucc. **Hornbeam maple.**

A small tree up to 30 feet high with oblong sharp-pointed doubly serrate leaves 3 to 5 inches long, short racemes of greenish flowers, and glabrous fruits about an inch long. The bright-green hornbeamlike leaves turn bright brownish yellow in autumn. Native to Japan.

For previous introduction see 85677.

91958. ACER CRATAEGIFOLIUM Sieb. and Zucc.

A small tree 30 to 35 feet high, with purplish branchlets, subcordate leaves with two to four short lobes near the base, racemes of yellowish-white flowers, and fruits with nearly horizontal wings. It is native to Japan.

For previous introduction see 85679.

91959. ACER DISTYLUM Sieb. and Zucc.

A deciduous tree about 50 feet high, with deeply cordate serrulate leaves 4 to 8 inches long and panicles of yellowish flowers followed by upright panicles of winged fruits. Native to Japan.

For previous introduction see 85680.

91960. ILEX LATIFOLIA Thunb. Aquifoliaceae. **Holly.**

For previous introduction and description see 91518.

91961 and 91962.

From Africa. Seeds presented by the director, Department of Agriculture, Akkra, Gold Coast. Received March 10, 1931.

91961. INDIGOFERA ARRECTA Hochst. Fabaceae. **Indigo.**

A shrub several feet high, with compound leaves made up of six to eight pairs of oblanceolate leaflets and racemes of yellow flowers. It is native to the Gold Coast of Africa where it is used as a forage crop.

91961 and 91962—Continued.

91962. PHASEOLUS TRINERVIUS Heyne. Fabaceae.

An annual or biennial vine, densely clothed with deflexed tawny hairs. The trifoliolate leaves have broadly ovate leaflets 3 to 5 inches long, and the red flowers are in clusters of three to six on flexuous peduncles. It is native to tropical Africa and Asia.

91963 to 91975.

From Kastrup, Denmark. Seeds presented by A. Hansen. Received March 10, 1931.

91963 to 91969. BRASSICA OLERACEA CAPITATA L. Brassicaceae. **Cabbage.**

91963. *Charleston Wakefield.*

91964. From the Copenhagen market.

91965. *Danish Ballhead,* a balloon-shaped variety.

91966. *Danish Ballhead,* an extra short-stemmed variety.

91967. *Danish Ballhead,* a short-stemmed variety.

91968. *Early Jersey Wakefield.*

91969. *Original Golden Acre.*

91970 to 91972. BRASSICA OLERACEA BOTRYTIS L. Brassicaceae. **Cauliflower.**

91970. *Dwarf Gerfurt.*

91971. *Snowball.*

91972. *Snowball No. 10.*

91973 to 91975. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

91973. *King of Denmark.*

91974. *Triumph.*

91975. *Princess Juliana.*

91976. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Moscow, Union of Soviet Socialist Republics. Seeds presented through Prof. J. Russell Smith, Columbia University, New York, N. Y. Received March 10, 1931.

91977. VITIS BERLANDIERI × RIPARIA. Vitaceae. **Grape.**

From Austria. Scions received from Kober, Kohlfurst & Co., Vienna. Received March 17, 1931.

Kober BB. A hybrid used as a stock. European varieties grafted on this stock are said to give early grapes of best quality.

91978 to 91980.

From Medellin, Colombia, South America. Seeds presented by Camilo C. Restrepo. Received March 10, 1931.

91978. ERIOCHLOA RAMOSA (Retz.) Kuntze. Poaceae. **Grass.**

A common grass in rather low ground with fairly erect slender stems. It is of value as a pasture grass wherever it will establish itself.

For previous introduction see 31597.

91979. JUGLANS COLUMBIENSIS Dode. Juglandaceae. **Walnut.**

A tree closely resembling the American black walnut (*J. nigra*), but the nuts are usually smaller.

91978 to 91980—Continued.

91980. RUBUS sp. Rosaceae.

La Concha. A large blackberry of the best quality, 1½ inches by 1 inch in diameter.

91981. AMOMUM sp. Zinziberaceae.

From Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received March 10, 1931.

Cardamomum. A plant 10 to 15 feet high, cultivated between 4,500 and 6,000 feet altitude.

91982 and 91983.

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received March 10, 1931.

91982. LOTUS CORNICULATUS L. Fabaceae. **Birdsfoot trefoil.**

A low-growing legume with yellow flowers.

For previous introduction see 69005.

91983. LOTUS ULIGINOSUS Schkuhr. Fabaceae.

A herbaceous perennial pasture plant which grows in wet swampy ground.

For previous introduction see 73267.

91984 to 92000.

From Canada. Seeds presented by J. Adams, Division of Botany, Central Experimental Farm, Ottawa. Received March 11, 1931.

91984 to 91990. ALLIUM spp. Liliaceae. **Onion.**

91984. ALLIUM CARINATUM L.

A species with narrowly linear leaves and purple-lilac flowers, produced in a comparatively large head. It is found throughout southern Europe, especially in the Alps.

For previous introduction see 78977.

91985. ALLIUM CAERULEUM Pall.

A wild onion, native to northern Europe, 2 or more feet high, with linear leaves and attractive light-blue flowers in erect rounded umbels.

For previous introduction see 78978.

91986. ALLIUM CAERULESCENS Boiss.

Experimental Farm No. 586. An onion about 1 foot high with rather short linear leaves and bluish-violet flowers in a short umbel. Native to Armenia.

91987. ALLIUM FETISOWI Regel.

An onion with linear-lanceolate or oblong leaves up to a foot high and a light-green scape, nearly 2 feet high, which bears a many-flowered umbel of small uniformly rosy lilac flowers. It is native to eastern Turkestan.

91988. ALLIUM FLAVUM L.

Pumilum roseum. A small pink form of an onion with an ascending or upright stem a foot or less high, narrowly linear leaves about as long as the stem, and small bell-shaped flowers in a rather dense cluster. Native to dry rocky places, especially in chalky soil, in south-central Europe.

For previous introduction see 82011.

91984 to 92000—Continued.

91989. ALLIUM GEYERI S. Wats.

For previous introduction and description see 91038.

91990. ALLIUM TEXTILE Nelson and McBride.

A hardy wild onion, with semiterete linear leaves which are shorter than the foot-high scape. The white flowers with purple keels are in lax umbels. Native to North America.

91991. KALANCHOE FLAMMEA Stapf. Crassulaceae.

A stout erect pale-green succulent, 1 foot high, native to Somaliland, Africa. The obovate, entire, or obscurely crenulate leaves are over 3 inches long, and the flowers are in a flat cyme 4 to 5 inches across. The corolla tube is pale yellow, while the petals are bright orange-red.

91992 to 91996. PRIMULA spp. Primulaceae. **Primrose.**

91992. PRIMULA ALGIDA Adam.

A perennial primrose, white or yellow-mealy throughout, with oblong-spatulate leaves and deep rose-violet flowers. It is native to damp places in Asia Minor and is closely related to *Primula farinosa*.

91993. PRIMULA LEUCOPHYLLA Pax.

For previous introduction and description see 91830.

91994. PRIMULA PAXIANA Gilg.

A showy herbaceous perennial with thin cordate-reniform triangular-lobed denticulate leaves on long petioles. The scape is 16 to 20 inches high and bears three to four superposed umbels of blue-lilac flowers 1 inch across. It is native to China.

91995. PRIMULA PAXII Hort.

A name for which a place of publication and a description have not been found.

91996. PRIMULA URALENSIS Hort.

A name for which a place of publication and a description have not been found.

91997 to 92000. ROSA spp. Rosaceae. **Rose.**

91997. ROSA BEGGERIANA Schrenk.

A bush 4 to 8 feet high with prickly pinnate leaves; the leaflets, usually seven to nine, are elliptic to oblong, smooth and deep green above, generally thickly hairy and bluish-green below. The inflorescences are 1 to nearly 50 flowered; the flowers are white, cream colored or more nearly red. The fruits are very dark red.

For previous introduction see 65774.

91998. ROSA CORNIFOLIA Hort.

A name for which a place of publication and a description have not been found.

91999. ROSA WASSERBURGENSIS Kirschl.

Said to be a hybrid between *Rosa tomentosa* and *R. pendulina*.

For previous introduction see 66945.

91984 to 92000—Continued.

92000. ROSA ZAGRABIENSIS Vukot. and Braun.

A large shrub with a very thorny stem and very leafy long branches. The five to seven leaflets are oval to oval-elliptic, and the pale-rose flowers are solitary or in twos or threes. It is related to *Rosa zalana* Wiesb. Native to Croatia.

92001. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Morocco. Seeds presented by H. Brayard, Ingénieur Horticole, Directeur de la Ferme Expérimentale, Marrakech. Received March 11, 1931.

Introduced for the use of specialists interested in plant breeding.

92002. MEDICAGO SATIVA VARIA (Mart.) Urban. Fabaceae. **Variegated alfalfa.**

From Canada. Seeds purchased from William Rennie Co. (Ltd.), Toronto. Received March 11, 1931.

Canadian.

92003 to 92010.

From Wales. Seeds presented by Dr. R. G. Stapledon, Director, Welsh Plant-Breeding Station, Aberystwyth. Received March 11, 1931.

92003 to 92008. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

Named varieties of late-flowering red clover.

92003. *Montgomery.*

92004. *Cotswold.*

92005. *Vale of Clwyd.*

92006. *Cornish Marl.*

92007. *Huntingdonshire.*

92008. *Essex.*

92009. PHLEUM PRATENSE L. Poaceae. **Timothy.**

92010. PHLEUM PRATENSE L. Poaceae. **Timothy.**

92011 to 92022. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

From Java. Seeds presented by L. Koch, Chief of the Section for the Breeding of Annual Plants, General Experiment Station, Buitenzorg. Received March 11, 1931.

A collection of pure strains, isolated from the erect type of Javanese peanuts, which are practically resistant to a bacterial root disease that is very common in Java.

92011. No. 34.	**92017.** No. 44.
92012. No. 7.	**92018.** No. 6.
92013. No. 9.	**92019.** No. 15.
92014. No. 16.	**92020.** No. 43.
92015. No. 10.	**92021.** No. 21.
92016. No. 49.	**92022.** No. 20.

92023 and 92024. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Peru. Seeds presented by Alberto Martin Lynch, Sayapullo (Trujillo). Received March 12, 1931.

Wheat grown at an altitude of 10,000 feet from Huancajanga, district of Sayapullo, Province of Cajabamba, Department of Cajamarca, where the rainfall is heavy.

92023. No. 1. *Mocho* (without beards). Seed came originally from Australia.

92024. No. 2. *Candeal* (hard wheat). Seed originally brought by the Spaniards during the colonial epoch.

92025. MALUS sp. Malaceae. **Apple.**

From France. Plants presented by J. Dufrenoy, Station de Recherches Agronomiques de Clermont-Ferrand. Received March 12, 1931.

Nor de Monton. An apple which is propagated by layering and is highly valued as a stock in the Clermont-Ferrand region.

92026 to 92029.

From Nigeria, Africa. Seeds presented by Rev. C. J. Bender, Grand Soppo Post Buea, Cameroon Province. Received March 13, 1931.

92026 and 92027. FLACOURTIA JANGOMAS (Lour.) Gmel. (*F. cataphracta* Roxb.). Flacourtiaceae. **Paniala.**

A small spiny tropical tree of compact habit, native to India. It bears small purplish fruits which may be made into an excellent jelly.

For previous introduction see 81688.

92026. Fruits the size of a small plum.

92027. A sport of *Flacourtia cataphracta.* The fruits are the size of a small cherry, very sweet, and with few seeds.

92028. CITRUS sp. Rutaceae.

A cross between a wild African orange and Las Palmas. The fruits are very sweet and luscious.

92029. RUBUS sp. Rosaceae.

A wild blackberry, grown at about 3,000 feet altitude.

92030. LECYTHIS ZABUCAJO Aubl. Lecythidaceae. **Sapucaya nut.**

From Port of Spain, Trinidad, British West Indies. Seeds purchased from R. O. Williams, Superintendent and Assistant Botanist, Department of Agriculture. Received March 13, 1931.

The sapucaya nut is native to the Amazon Valley and adjacent regions, and many people consider it even better flavored than the Brazil nut. The somewhat triangular nuts are over 2 inches long and about 1 inch wide. They are borne in large woody urn-shaped capsules about 6 inches in diameter, with close-fitting lids at the top. It is a slow grower, and a long time is required for the trees to reach the bearing age. It seems unlikely that this tree will succeed in the United States, but it may do so in the Canal Zone, Puerto Rico, Hawaii, and elsewhere in the Tropics.

For previous introduction see 63427.

92031. COUEPIA GRANDIFLORA (Mart. and Zucc.) Benth. Rosaceae.

From Brazil. Seeds presented by E. I. du Pont de Nemours & Co., Wilmington, Del., through G. S. Jamieson, United States Department of Agriculture. Received March 18, 1931.

A small tree with stout branches, linear-oblong, coriaceous leaves 3 to 6 inches long, and small flowers in densely tomentose compound panicles 5 to 10 inches long. It is native to Brazil, and the seeds are said to produce a valuable oil.

92032. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From New South Wales, Australia. Seeds presented by John Douglas, Field Branch, Department of Agriculture, Sydney. Received March 13, 1931.

Angelo. A very prolific variety of exceptionally high quality under Australian conditions.

92033. RHODODENDRON PENTAPHYLLUM Maxim. (*Azalea quinquefolia rosea* Rehd.). Ericaceae. **Fiveleaf azalea.**

From Japan. Seeds purchased from T. Sakata & Co., Yokohama. Received March 13, 1931.

For previous introduction and description see 91247.

92034. EREMOCHLOA ZEYLANICA Hack. Poaceae. **Grass.**

From Ceylon. Seeds presented by the systematic botanist. Department of Agriculture, Peradeniya. Received March 13, 1931.

A perennial grass, native to Ceylon, 12 to 18 inches high, with narrow leaves and slender spikes. Of possible value for lawns and pastures.

For previous introduction see 78038.

92035 and 92036.

From Quetta, India. Plants purchased from the Quetta Fruit Agency. Received March 14, 1931.

92035. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Nari Pas Ras.

92036. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

Garma Sarda.

92037. GUILIELMA GASIPAES (H. B. K.) Bailey (*G. speciosa* Mart.). Phoenicaceae. **Pupunha.**

From Cali, Colombia. Seeds presented through C. B. Doyle, Bureau of Plant Industry. Received March 14, 1931.

A palm with clustered stems that attain a height of 40 feet. The fruit grows in large bunches and has a firm, thick, and mealy pericarp which when cooked has a flavor resembling that of a chestnut.

For previous introduction see 81587.

92038 to 92044. OCIMUM BASILICUM L. Menthaceae. **Common basil.**

From Paris, France. Seeds purchased from Vilmorin-Andrieux & Co. Received March 16, 1931.

92038 to 92044—Continued.

Introduced for the use of department specialists working with drug plants.

92038. *Large green.*

92039. *Purple.*

92040. *Bush green.*

92041. *Bush green, compact.*

92042. *Purple, compact.*

92043. *Lettuce-leaved.*

92044. *Curled.*

92045 to 92072.

From Manchuria and China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 17, 1931.

Nos. 92045 to 92050 were received from Manshu Nosan Shokai (Inc.), seed growers, Dairen, Manchuria, February 3, 1931.

92045. AQUILEGIA OXYSEPALA Trautv. and Mey. Ranunculaceae. **Early columbine.**

No. 7726. *Siberian mountain* columbine. A very early-flowering herbaceous perennial 2 to 3 feet high, with blue, yellow, and white flowers. The spurs are short and are bent inward. It is native to Siberia.

For previous introduction see 68407.

92046. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

No. 7732. Wild-peach seeds which are larger and rougher than any before collected.

92047. CELTIS SINENSIS Pers. Ulmaceae. **Chinese hackberry.**

No. 7717. A tree, native to China and Japan, which grows to a height of 60 feet. The broadly ovate leaves, 2 to 4 inches long, are cordate at the base and acuminate at the apex, with a serrate-dentate margin. The dull orange-red fruits are borne on stout pedicels. This tree has proved hardy at the Arnold Arboretum.

For previous introduction see 85732.

92048. CORYLUS SIEBOLDIANA MANDSHURICA (Maxim.) C. Schneid. Betulaceae. **Hazelnut.**

No. 7731. A Manchurian shrub up to 15 feet high, with oblong or elliptic leaves and clusters of small edible nuts.

For previous introduction see 72641.

92049. CORYLUS SIEBOLDIANA Blume. Betulaceae. **Japanese hazel.**

No. 7729. A shrub up to 15 feet high, with elliptic to obovate, doubly serrate and slightly lobed leaves 2 to 4 inches long, often with a purple blotch in the middle. The tubular involucre, covered with bristly hairs, is 1 to 2 inches long and incloses the edible nut. It is native to Japan.

92050. EUONYMUS MAACKII Rupr. Celastraceae.

No. 7719. A large shrub or small tree with narrowly oval leaves about 3 inches long and small clusters of pink 4-lobed fruits which have orange-red arils. Native to northeastern Asia.

For previous introduction see 77829.

92045 to 92072—Continued.

92051. LESPEDEZA sp. Fabaceae. **Bushclover.**

No. 7665. From Fa Hua Ssu Temple, near Peiping. A variety with purple flowers.

92052. LESPEDEZA sp. Fabaceae **Bushclover.**

No. 7716. Said to be white flowered and valuable as an ornamental. Received from the Manshu Nosan Shokai (Inc.), seed growers, February 3, 1931.

92053 to 92055. PHASEOLUS spp. Fabaceae.

Locally grown seed purchased from a grain dealer at Tientsin, China, January 6, 1931.

92053. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. **Adzuki bean.**

No. 7686. A small white bean.

92054. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 7687. A mixed sample of yellow and green beans.

92055. PHASEOLUS AUREUS Roxb. **Mung bean.**

No. 7688. A glossy green bean.

Nos. 92056 to 92062 were received from the Manshu Nosan Shokai (Inc.), seed growers, February 3, 1931.

92056. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

No. 7730.

For previous introduction and description see 91010.

92057. PRUNUS TOMENTOSA Thunb. Amygdalaceae. **Nanking cherry.**

No. 7725. Introduced for the use of plant breeders.

92058. PYRUS FAURIEI C. Schneid. Malaceae. **Pear.**

No. 7728. The Korean wild pear is a very thorny tree about 8 feet high, with fruits the size of a Concord grape, russet with numerous brown spots. Introduced for trial as a stock for commercial pears and also as an ornamental.

For previous introduction see 82159.

92059. MALUS PRUNIFOLIA (Willd.) Borkh. (*Pyrus prunifolia* Willd.). Malaceae. **Pearleaf crab.**

No. 7724. A small tree with pubescent branchlets, ovate to elliptic sharply serrate leaves 2 to 4 inches long, and clusters of white flowers 1 inch across, followed by ovoid yellow or red fruits which persist on the tree for a long time. Native to northeastern Asia.

92060. ROSA MAXIMOWICZIANA Regel. Rosaceae. **Rose.**

No. 7715. A shrub with arching stems armed with scattered hooked prickles and bristles. The compound leaves are made up of seven to nine ovate to oblong finely serrate leaflets 2 to 3 inches long, and the white flowers, 2 to 3 inches across, are borne in many-flowered corymbs. It is native to Manchuria and Chosen.

92061. SAMBUCUS RACEMOSA L. Caprifoliaceae. **European red elder.**

No. 7727. The Chinese elder, of possible ornamental value.

92045 to 92072—Continued.

92062 to 92066. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. Soybean.

92062. No. 6792. *Moshito.* Received from Mr. O'Hara, Dairen, Manchuria, February 9, 1930. A medium-small much-flattened glossy yellowish-brown bean; used for green manure and as forage for horses.

Nos. 92063 to 92066 were purchased in Tientsin, Chihli Province, China, January 6, 1931.

92063. No. 7682. An oblong somewhat flattened black bean with yellow germ and gray hilum. Said to be locally grown.

92064. No. 7683. A locally grown rather small light-yellow bean which is irregular in size; germ yellow and hilum inconspicuous.

92065. No. 7684. A locally grown light-green bean which is irregular in size, some being quite small; germ yellow, hilum more or less inconspicuous.

92066. No. 7685. A large nearly round deep-green bean with green germ and rather inconspicuous hilum; said to be locally grown.

Nos. 92067 to 92071 were received from the Manshu Nosan Shokai (Inc.), seed growers, Dairen, Manchuria, February 3, 1931.

92067. SYRINGA AMURENSIS Rupr. Oleaceae. Manchurian lilac.

No. 7723. A lilac which grows from a shrub to a small tree, with large handsome clusters of white flowers.

92068. SYRINGA OBLATA DILATATA (Nakai) Rehder. Oleaceae. Lilac.

No. 7720. A loosely branched shrub up to 12 feet high, with ovate long-pointed leaves 6 inches long which turn vinous red in autumn, and loose clusters of pale purple-lilac flowers which appear early in the spring. It is native to Chosen.

For previous introduction see 85739.

92069. TILIA MANSHURICA Rupr. and Maxim. Tiliaceae. Linden.

No. 7721. A small-leaved linden, native to Manchuria.

For previous introduction see 73059.

92070. VACCINIUM ULIGINOSUM L. Vacciniaceae. Bog bilberry.

No. 7718. A low shrub 1 to 2 feet high with nearly sessile obovate entire leaves 1 inch long, axillary clusters of one to four pink or white urn-shaped flowers a quarter of an inch long, and blue-black edible sweet berries. It is native to northern Europe, Asia, and America.

92071. VIBURNUM SARGENTI Koehne. Caprifoliaceae. Sargent cranberrybush.

No. 7722. A strong-growing shrub 12 to 15 feet high, somewhat resembling *Viburnum opulus*, with broadly ovate 3-lobed leaves and large clusters of bright-red fruits which are very attractive. It is native to northeastern Asia.

For previous introduction see 71167.

92045 to 92072—Continued.

92072. VIGNA SINENSIS (Torner) Savi. Fabaceae. Cowpea.

No. 7689. From Tientsin, Chihli Province, China. A mottled red-brown cowpea which is commonly grown in this vicinity.

92073 to 92092.

From the Union of Soviet Socialist Republics. Seeds presented by the director, Regional Oil Plant Station, Kruglik, Northern Caucasus. Received March 17, 1931.

92073 to 92083. ARACHIS HYPOGAEA L. Fabaceae. Peanut.

92073. *African.*

92074. *Spanish.*

92075. *Spanish No. 4.*

92076. *Spanish No. 10.*

92077. *Spanish No. 308.*

92078. *Spanish No. 330.*

92079. *Improved Spanish.*

92080. *Tennessee Red.*

92081. *Valencia.*

92082. *Valencia No. 479.*

92083. *Virginia Bunch.*

92084 to 92086. BRASSICA spp. Brassicaceae.

92084. BRASSICA NIGRA (L.) Koch. Black mustard.

Received as *Brassica nigra*, but the seeds look like *B. juncea.*

92085. BRASSICA NAPUS L. Rape.

A collection of early varieties.

92086. BRASSICA NAPUS L. Rape.

A collection of late varieties.

92087. CAMELINA SATIVA (L.) Crantz. Brassicaceae.

An annual crucifer 1 to 2 feet high with lanceolate leaves and small yellow flowers. It is cultivated in Europe for the oil expressed from the seeds, and is also used as fodder for cattle.

92088. HELIANTHUS ANNUUS L. Asteraceae. Common sunflower.

No. 631.

92089. HELIANTHUS ANNUUS L. Asteraceae. Common sunflower.

No. A–41.

92090. PERILLA FRUTESCENS (L.) Britton (*P. ocymoides* L.). Menthaceae. Green perilla.

Sou tze.

For previous introduction and description see 91061.

92091. RICINUS COMMUNIS L. Euphorbiaceae. Castor-bean.

Compactus (improved).

92092. RICINUS COMMUNIS L. Euphorbiaceae. Castor-bean.

Compactus No. 5.

92093. CITHAREXYLUM BERLANDIERI Robinson. Verbenaceae.

From Brownsville, Tex. Seeds presented by Peter H. Heinz. Received March 17, 1931.

An ornamental shrub or small tree of upright rather loose growth, which may be made compact by clipping, oblong or rhombic leaves about 4 inches long, and short axillary racemes of glossy purple berries. Early in March it flowers in profusion and at the same time bears clusters of old well-ripened glossy purple berries, as well as younger coral-red ones. The ripe berries are eaten by ducks and other birds. It is native to Mexico.

For previous introduction see 78537.

92094 to 92134.

From Nagar, Kulu, Punjab, British India. Seeds collected by Walter Koelz, Botanist, Himalayan Research Institute, and presented through Prof. Harley H. Bartlett, Department of Botany, University of Michigan, Ann Arbor, Mich. Received March 18, 1931.

A collection of plants native to the Himalayan region.

92094. ACONITUM sp. Ranunculaceae.

No. 6. An aconite 18 inches high, with large, musk-scented flowers, found between 12,000 and 14,000 feet altitude.

92095. AQUILEGIA sp. Ranunculaceae. Columbine.

No. 11. A very attractive blue and yellow fragrant-flowered columbine, 18 inches high; found in open places and in forests between 10,000 and 11,000 feet altitude.

92096. ANEMONE sp. Ranunculaceae. Windflower.

No. 15. An attractive anemone, 8 inches tall, with large white flowers; found between 10,000 and 12,000 feet altitude.

92097. ANGELICA sp. Apiaceae.

No. 32a. A plant found in damp places at 10,000 feet altitude, whose roots are used to flavor meat.

92098 to 92101. ASTER spp. Asteraceae.

92098. ASTER sp.

No. 3. An attractive aster, 12 inches high, with purple flowers; found between 13,000 and 15,000 feet altitude in the Province of Lahul.

92099. ASTER sp.

No. 21. Collected in the Province of Lahul, and probably like No. 3 [92098].

92100. ASTER sp.

No. 22. Collected in the Province of Lahul, and probably like No. 3 [92098].

92101. ASTER sp.

No. 24. A much-branched aster 4 feet high, with lavender flowers, collected in the Shalina Gardens, Lahore, Punjab.

92102. CHRYSANTHEMUM sp. Asteraceae.

No. 29. *Kanfa.* A yellow scented chrysanthemum found between 12,000 and 14,000 feet altitude.

92094 to 92134—Continued.

92103. CHRYSANTHEMUM sp. Asteraceae.

No. 34. *Pat O.* Collected in Lahul Province at 10,000 feet altitude. A yellow-flowered variety, used for flavoring soups.

92104. DIANTHUS sp. Silenaceae.

No. 2. Collected in Lahul Province at 10,000 feet altitude. An attractive plant with pink flowers, found growing in dry places. It may prove useful for dry borders.

92105. HIPPOPHAE RHAMNOIDES L. Elaeagnaceae.

No. 30. A hardy deciduous shrub 10 feet high, with dense silvery foliage and orange-yellow fruits, found in dry places in Lahul Province at 10,000 feet altitude.

For previous introduction see 74684.

92106. IMPATIENS sp. Impatientaceae.

No. 10. Collected at Chanderkani, Kulu, at 12,000 feet altitude. A very attractive impatiens, 10 feet high, with large rose flowers.

92107. IRIS sp. Iridaceae.

No. 5. Collected in Lahul Province between 10,000 and 14,000 feet altitude. An iris 6 inches high, with large fragrant purple flowers.

92108. PISUM SATIVUM L. Fabaceae.

No. 31a. *Shadma.* Collected in Lahul Province. A cultivated variety.

92109. MALVA sp. Malvaceae.

No. 9. Collected at Trilognath, Chamba, at 9,000 feet altitude, in dry places. A rose malva 6 feet high.

92110. MECONOPSIS sp. Papaveraceae.

No. 8. From Lahul Province between 12,000 and 15,000 feet altitude. A very attractive blue poppy.

92111 to 92115. PEDICULARIS spp. Scrophulariaceae.

92111. PEDICULARIS sp.

No. 16. Collected in Rothang Pass, between 12,000 and 14,000 feet altitude. A pedicularis 12 inches high with large yellow flowers.

92112. PEDICULARIS sp.

No. 17. Collected in Lahul Province in fields at 10,000 feet altitude. A very attractive pink pedicularis 2 feet high.

92113. PEDICULARIS sp.

No. 18. Collected along a stream in Lahul Province at 10,000 feet altitude. A variety 12 inches high whose flowers are pink rose with a white throat.

92114. PEDICULARIS sp.

No. 19. Collected in Lahul Province at 10,000 feet altitude.

92115. PEDICULARIS sp.

No. 20. Collected in Lahul Province at 10,000 feet altitude.

92116. PLEUROSPERMUM APIOLENS C. B. Clarke. Apiaceae.

No. 26a. Collected in Rothang Pass at 13,000 feet altitude. Used to keep moths out of clothes.

92094 to 92134—Continued.

92117. POLYGONUM sp. Polygonaceae.

No. 13. Collected in Lahul Province at 10,000 feet altitude. An attractive buckwheat with fragrant white flowers. It grows in masses 8 feet high.

92118. POLYGONUM sp. Polygonaceae.

No. 14. Collected at Kulu, Punjab, between 10,000 and 12,000 feet altitude. A buckwheat with bright-red flowers.

92119. PRIMULA sp. Primulaceae.

No. 12. Collected in Lahul Province between 13,000 and 14,000 feet altitude. A very attractive primrose with royal-purple flowers.

92120. PRUNUS sp. Amygdalaceae.

92121. RHODODENDRON sp. Ericaceae.

No. 4. Collected in Rothang Pass at 12,000 feet altitude. A shrub up to 10 feet high with purple flowers.

92122 to 92125. RIBES spp. Grossulariaceae.

92122. RIBES sp.

92123. RIBES sp.

No. 26b.

92124. RIBES sp.

No. 27. Collected in Lahul Province at 10,000 feet altitude. The fruit is made into preserves.

92125. RIBES sp.

No. 32. Collected in Lahul Province at 10,000 feet altitude.

92126 to 92131. ROSA spp. Rosaceae.

92126. ROSA sp.

No. 1. Collected in Lahul Province at 10,000 feet altitude on dry ground. A very attractive, many-flowered pink rose, up to 8 feet high.

92127. ROSA sp.

No. 1a. Same as No. 1 [92126], but the seeds are from a different bush.

92128. ROSA sp.

No. 7. Collected in Lahul Province at 10,000 feet altitude. A free-flowering bush, 6 feet high, with very attractive large yellow flowers.

92129. ROSA sp.

No. 7a. Same as No. 7 [92128], but the seeds are from a different bush.

92130. ROSA sp.

No. 33. A pink rose collected at 9,000 feet altitude in Chyassu Rampus-Bushahs.

92131. ROSA MOSCHATA Mill. **Musk rose.**

No. 28. Collected at Kulu, Punjab.

92132. SENECIO CHRYSANTHEMOIDES D C.

No. 25. Collected in Lahul Province at 10,000 feet altitude. A much-branched plant, 2 feet high, with yellow flowers which are much esteemed by the natives.

92133. SENECIO CHRYSANTHEMOIDES D C. Asteraceae.

No. 26. Collected in Lahul Province It is probably the same as No. 25 [92132].

92094 to 92134—Continued.

92134. TYPHONIUM sp. Araceae.

No. 31. Collected in Rothang Pass at 13,000 feet altitude.

92135 and 92136.

From Southern Rhodesia, Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda. Received March 18, 1931.

92135. STRYCHNOS MELLODORA S. Moore. Loganiaceae.

A tree much prized for its strong fine-grained timber, which is used for tool handles and fancy furniture. When in fruit the tree resembles a cherry tree.

For previous introduction see 54921.

92136. TRICHILIA CHIRINDENSIS Swynn. and Baker. Meliaceae.

Ukuhla. A fine timber tree with a spreading head of dark glossy leaves, light-gray bark, and dull-white flowers. It makes an excellent shade tree, sometimes becoming 120 feet high. The timber is reddish brown and easily worked. The seeds are partially covered with a white pulp (inclosed by a bright-red skin) having a nutty flavor, and although there is very little of it, the natives are very fond of it. An oil is obtained from the seeds.

For previous introduction see 54922.

92137 to 92139. SOLANUM MELONGENA L. Solanaceae. Eggplant.

From Giza, Egypt. Seeds presented by Thomas W. Brown, Director, Horticultural Section, Ministry of Egypt. Received March 18, 1931.

Egyptian-grown seed, introduced for the use of specialists who are trying to breed a variety immune from the eggplant wilt.

92137. *Long Black.*

92138. *Globe.*

92139. *White.*

92140 to 92147.

From the Netherlands. Seeds purchased from Zwaan & De Wilies Seed Co. (Inc.), Scheemda, Groningen. Received March 18, 1931.

92140 to 92142. BETA VULGARIS L. Chenopodiaceae. **Beet.**

92140. *Crimson Globe.*

92141. *Detroit Dark Red.*

92142. *Crosby's Egyptian.*

92143 to 92147. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

92143. *Reselected Bloomsdale.*

92144. *Prickly Winter.*

92145. *Victoria.*

92146. *Viroflay.*

92147. *Juliano.*

92148 to 92166.

From England. Seeds purchased from Thompson & Morgan, Ipswich. Received March 18, 1931.

92148 to 92166—Continued.

92148. ANEMONE RANUNCULOIDES L. Ranunculaceae. **Yellow wood anemone.**

A low herbaceous perennial with stems 3 to 8 inches high from a somewhat tuberous rootstock. The leaves are 3-parted to 5-parted, with the lobes deeply cut and serrated, and the solitary golden-yellow flowers are single or semidouble. It is native to Europe and Siberia and flowers in March and April.

92149. ASPARAGUS ACUTIFOLIUS L. Convallariaceae.

A hardy evergreen species which makes a beautiful hedge plant, somewhat resembling the juniper. As the plants grow older there is a tendency to produce vinelike shoots. The tuberlike storage roots and drought-resistant foliage make it valuable for regions of scanty rainfall. The shoots are edible, although much smaller than those of ordinary asparagus. The flavor, however, is said by some to be superior to the common species.

For previous introduction see 49458.

92150. BLOOMERIA AUREA Kellogg. Liliaceae. **Goldenstar.**

A small summer-flowering bulbous perennial, closely resembling the alliums. The grasslike leaves are radical, and the stiff slender scape, 6 to 18 inches high, bears an umbel of wheel-shaped golden-yellow flowers nearly 1 inch across. It is native to California.

92151. BRODIAEA CANDIDA Baker. Liliaceae.

A spring-flowering bulbous perennial, with linear leaves and scapes 1 to 2 feet high bearing umbels of tubular white or bluish flowers with a green midrib. It is native to California and is probably not hardy north of Virginia.

92152. BRODIAEA LACTEA (Lindl.) S. Wats. Liliaceae.

A bulbous perennial, native to California, with stems 1 to 2 feet high, linear leaves, and an umbel of wheel-shaped white flowers having a green midvein.

92153 to 92157. CALOCHORTUS spp. Liliaceae.

92153. CALOCHORTUS ALBUS Dougl. **White globe-tulip.**

A bulbous perennial, native to California, with a single basal leaf and a slender flexuous leafy branched stem bearing several globular pendent white flowers 1 inch across.

92154. CALOCHORTUS CATALINAE S. Wats. **Catalina mariposa.**

A bulbous perennial with branching stems 1 to 2 feet high and large handsome white to deep-lilac flowers having a round black spot at the base of each petal. It is native to Santa Catalina Island.

92155. CALOCHORTUS CLAVATUS S. Wats. **Golden mariposa.**

A bulbous perennial, native to California, with stout stems and golden-yellow bowl-shaped flowers 5 to 6 inches across.

92148 to 92166—Continued.

92156. CALOCHORTUS KENNEDYI Porter.

A low bulbous perennial 1 to 4 inches high, with linear tufted leaves and 2-flowered to 4-flowered umbels of red-orange to vermilion flowers with a purple spot at the base of each segment. It is native to the deserts of southern California.

92157. CALOCHORTUS PLUMMERAE Greene. **Santa mariposa.**

A bulbous perennial with a broad glossy radical leaf, branching stems 1 to 2 feet high, and very showy lilac to purple flowers of triangular square-topped petals having the margins lined with long silky hairs. It is native to southern California.

92158. CHLOROGALUM POMERIDIANUM Kunth. Liliaceae. **Amole.**

A perennial with a bulb 4 inches long and 2 inches thick, sending up a stem 5 feet high. The basal leaves are linear and wavy margined, and the numerous starlike white flowers with purple veins are in a terminal panicle and open in the afternoon. It is native to California, and the bulbs are used for soap making.

92159. CLAYTONIA ROSEA Rydb. Portulacaceae. **Springbeauty.**

A delicate bulbous perennial, native to Colorado, with spatulate basal leaves, linear-lanceolate stem leaves, and 5 to 10 pink flowers on a short stem.

92160. CLAYTONIA VIRGINICA L. Portulacaceae. **Virginia springbeauty.**

A smooth succulent bulbous perennial 4 to 8 inches high, with linear-lanceolate leaves 2 to 6 inches long and a loose raceme of pink-tinged white flowers. It is native to the eastern United States.

92161. DICENTRA CHRYSANTHA Walp. Papaveraceae. **Golden eardrops.**

The yellow-flowered bleedingheart, found at an altitude of 2,500 feet in the Coast Range Mountains of California. It is a glaucous perennial with stiff course leafy stems 2 to 3 feet high and bipinnate leaves 1 foot or more in length. The yellow flowers, about half an inch long, are borne in large racemose panicles.

92162. ERYTHRONIUM CALIFORNICUM Purdy. Lillaceae. **California troutlily.**

A bulbous perennial with two richly mottled lanceolate leaves and a scape bearing up to 16 nodding lilylike creamy to light-yellow flowers with revolute petals marked maroon at the base. It is native to California.

92163. ERYTHRONIUM HENDERSONI S. Wats. Liliaceae. **Henderson troutlily.**

A bulbous perennial with lanceolate to oblong leaves mottled in dark brown and one to three pale-purple flowers having recurved petals and a dark, almost black, center. It is native to southern Oregon.

92164. LEWISIA FINCHII Hort. Portulacaceae.

A name for which a place of publication has not been found. It is said to be a rare and beautiful rock plant with rosettes of fleshy leaves and handsome soft-pink flowers.

92148 to 92166—Continued.

92165. PHORMIUM TENAX Forst. Liliaceae. **New Zealand flaxlily.**

A plant with rigid, sword-shaped leaves 6 or more feet in length and a flower stalk sometimes 15 feet high, which bears numerous dull-red or yellow flowers. Adapted for growing out of doors in Florida and California and as a tub plant farther north.

For previous introduction see 64197.

92166. SANGUISORBA CANADENSIS L. Rosaceae. **American burnet.**

A stout herbaceous perennial 5 to 6 feet high, with unequally pinnate leaves made up of 6 to 10 pairs of cordate serrate leaflets and cylindrical flower heads, 2 to 6 inches long, of small white flowers. It is native to the eastern part of the United States.

92167 to 92176.

From Mexico. Material collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received March 18, 1931.

92167. FUCHSIA SPLENDENS Zucc. Onagraceae.

No. 83. Cuttings collected on the road between San Cristóbal and Tenejapa, Chiapas, February 28, 1931, at 3,500 feet altitude. A much-branched ornamental shrub about 5 feet high. The single drooping flowers, over 1 inch long, are scarlet with greenish-yellow tips and greenish petals. The tube is over twice the length of the calyx lobes, the pointed petals half as long as the tube; the stamens are much exerted and the anthers are yellow.

92168 to 92175. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. **Avocado.**

Nos. 92168 to 92170 were scions collected February 26, 1931, at 1,900 feet altitude at San Andres, northwest of San Cristóbal, Chiapas.

92168. No. 69. Tree about 35 feet high.

92169. No. 70. A small wild avocado with thin skin, instead of the thick skin of the usual type in this region. Collected from a tree 30 feet high.

92170. No. 71. *Aguacate.* The common type of hard-skinned wild avocado. Tree about 45 feet high.

92171. No. 86. Scions collected February 28, 1931, from a tree 25 feet high, growing along the road between San Cristóbal and Tenejapa, Chiapas, at 3,500 feet altitude.

92172. No. 37. Fruit bought in the market at Tuxtla Gutierrez, Chiapas, but said to have come from the area around San Cristóbal. A very hard-shelled, round avocado.

Nos. 92173 to 92175 were fruits bought in the market of San Cristóbal, Chiapas, February 27, 1931.

92173. No. 77. A pear-shaped avocado.

92174. No. 78. A very small round avocado, said to have come from San Pedro, Chiapas.

92175. No. 79. The ordinary-sized round avocado. Origin not known.

92167 to 92176—Continued.

92176. SOLANUM sp. Solanaceae.

No. 3. Tubers collected in January, 1931, at approximately 10,000 feet altitude, in El Desierto, Distrito Federal.

92177. CYCAS PECTINATA Griff. Cycadaceae.

From India. Seeds purchased from the Chandra Nursery, Rhenock, Sikkim State. Received March 20, 1931.

An evergreen palmlike tree, 8 to 10 feet high, native to India, with ascending recurved compound leaves 5 to 7 feet long, made up of sword-shaped narrowly linear leaflets 7 to 10 inches long. The carpophylls, or fruit-bearing leaves, are about 10 inches long, broadly rounded, and long pointed, and are covered with dense tawny wool.

92178 and 92179.

From Mexico. Scions collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received March 21, 1931.

92178. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. **Avocado.**

No. 59. *Aguacate.* Collected in February, 1931, at La Laguna, between Acala and San Cristóbal, Chiapas. The common type of hard-skinned wild avocado.

92179. (Undetermined.)

No. 50. *Jogote.* Collected February 21, 1931, near Acala, Chiapas, at 2,800 feet altitude. A cultivated tree, 10 feet high, with edible fruit.

92180 to 92188.

From the Netherlands. Seeds presented by Zwaan & De Wiljes Seed Co. (Inc.), Scheemda, Groningen. Received March 21, 1931.

92180 to 92183. BETA VULGARIS L. Chenopodiaceae. **Beet.**

92180. *Early Wonder.*

92181. *Extra Early Flat Egyptian.*

92182. *Waef Long Blood.*

92183. *Long Smooth Blood.*

92184 to 92188. SPINACIA OLERACEA L. Chenopodiaceae. **Common spinach.**

92184. *Triumph.*

92185. *New Zealand.*

92186. So-called *Nobel.*

92187. *Bloomsdale Long-standing Dark-green.*

92188. *King of Denmark.*

92189. RUBUS URSINUS Cham. and Schlecht. Rosaceae. **Logan blackberry.**

From England. Plants purchased from Laxton Bros., Bedford. Received March 21, 1931.

A red-fruited variety of the wild trailing blackberry of the Pacific coast.

92190 and 92191. CITRULLUS NAUDINIANUS Hook. Cucurbitaceae.

From the Union of South Africa. Seeds presented by Herbert Lang, Transvaal Museum, Pretoria. Received March 23, 1931.

A wild watermelon said to have a perennial root, trailing pubescent stems, and leaves like those of *C. colocynthis*. The seeds received are similar to those of the colocynthis in shape, but are the size of the common watermelon.

92190. Received as Gemsbok cucumber.

92191. Received as Tsama melon.

92192 to 92197.

From Summit, Canal Zone. Seeds presented by J. E. Higgins, Director, Canal Zone Experiment Gardens. Received March 23, 1931.

92192. ARECA ALICAE F. Muell. Phoenicaceae. **Palm.**

An Australian palm with several slender graceful spineless trunks, 9 feet or more in height, and pinnate shining-green leaves 3 to 6 feet long.

For previous introduction see 68107.

92193. CALOPHYLLUM CALABA L. Clusiaceae. **Calaba-tree.**

A West Indian relative of the mangosteen (*Garcinia mangostana*) which becomes a tree 60 feet high, with dark-green glossy foliage and axillary clusters of white flowers. The wood is used for building purposes, and in Puerto Rico the oil pressed from the seeds is sometimes used in lamps.

For previous introduction see 62141.

92194. CANANGIUM ODORATUM (Lam.) Baill. Annonaceae. **Ylang-ylang.**

A large quick-growing tree, 60 to 80 feet high, native to the Philippines, Guam, and Java. The large greenish-yellow flowers are strongly scented and yield by distillation the popular perfume, ylang-ylang.

For previous introduction see 51811.

92195. CASSIA MULTIJUGA Rich. Caesalpiniaceae.

A small tree 15 to 20 feet high, with compound leaves made up of linear leaflets about half an inch long and large yellow flowers followed by flat glabrous pods 6 inches long and less than an inch wide. It is native to Mexico, South America, and the West Indies.

92196. ELAEIS MELANOCOCCA Gaertn. Phoenicaceae. **Palm.**

A widespreading low palm which grows in damp situations. It is closely related to the African oil palm (*Elaeis guineensis*), and a clear oil is extracted from the kernels in small quantities by the natives, who prize it highly for cooking.

For previous introduction see 61627.

92197. WARSZEWICZIA COCCINEA (Vahl) Klotzsch. Rubiaceae.

An ornamental tree with dark-green foliage and clusters of small flowers, each a quarter of an inch across. One sepal of each cluster is brilliant scarlet and over 2 inches long, making a startling splash of color against the dark leaves. The tree blooms in summer (the wet season), whereas most of the showy flowering trees of the Tropics bloom in the dry season.

For previous introduction see 56022.

92198. BEAUMONTIA GRANDIFLORA (Roth) Wall. Apocynaceae.

From Mount Joy, Dominica, British West Indies. Seeds presented by Stephen Haweis. Received March 24, 1931.

A tall-growing woody vine with obovate cuspidate wavy-margined leaves and cymes of large pure-white fragrant bell-shaped flowers. It is native to India.

For previous introduction see 42971.

92199 to 92245.

From Europe and Asia Minor. Seeds collected by James G. Dickson, United States Department of Agriculture. Received March 24, 1931.

92199 to 92219. MEDICAGO spp. Fabaceae. **Alfalfa.**

Nos. 92199 to 92212 were collected in the Union of Soviet Socialist Republics.

92199. MEDICAGO FALCATA L. **Yellow-flowered alfalfa.**

No. 151. An alfalfa hybrid of the semierect type. It is hardy at Kharkof, Ukraine.

92200. MEDICAGO FALCATA L. **Yellow-flowered alfalfa.**

No. 199. From Erivan, Armenia, July 20, 1930; collected on canyon slopes at 200 feet altitude. A wild species which is a good seed producer.

92201. MEDICAGO SATIVA L.

No. 157. From Saratov, August 14, 1930. A winter-resistant variety which seeds freely along the dry roadside.

Nos. 92202 to 92208 were collected June 29, 1930, at Atrada Kubanska.

92202. MEDICAGO SATIVA VARIA (Mart.) Urban. **Variegated alfalfa.**

No. 158. *Grimm*. A very good seed producer.

92203. MEDICAGO SATIVA L.

No. 159. *Kharkov* strain. Very good seed.

92204. MEDICAGO SATIVA L.

No. 160. *Turkestan* alfalfa. A medium-good seed producer.

92205. MEDICAGO FALCATA L. **Yellow-flowered alfalfa.**

No. 161. A yellow-flowered hybrid of the erect type.

92206. MEDICAGO SATIVA L.

No. 162. *Frankenburg* alfalfa. A very good seed.

92207. MEDICAGO FALCATA L. **Yellow-flowered alfalfa.**

No. 163. A white-flowered hybrid, good seed, but not very hardy.

92208. MEDICAGO FALCATA L.

No. 164. A semierect, very leafy form.

92209 to 92211. MEDICAGO SATIVA L.

92209. No. 165. *Midi* alfalfa. Collected in the south of France.

92210. No. 166. A semierect form from Alma Ata (Viernii), Union of Soviet Socialist Republics.

92199 to 92245—Continued.

92211. No. 167. *Alma Atinka.* A hardy variety from near Wierny, Kasakstan, Union of Soviet Socialist Republics.

92212. MEDICAGO SATIVA VARIA (Mart.) Urb. Variegated alfalfa.

No. 168. From the West Siberian Experiment Station.

92213. MEDICAGO SATIVA VARIA (Mart.) Urb. Variegated alfalfa.

No. 169. From Paris, France. Received from Vilmorin-Andrieux & Co.; crop of 1928.

92214 to 92216. MEDICAGO FALCATA L. Yellow-flowered alfalfa.

Collected in the Union of Soviet Socialist Republics.

92214. No. 170. From the District of Samara.

92215. No. 171. Sickle shaped. From the Agricultural Experiment Station, District of Voronezh.

92216. No. 172. From the Subdivision of Selection, West Siberian Experiment Station, District of Akmolin.

92217 to 92219. MEDICAGO SATIVA L.

92217. No. 173. From Aulis Ata, near Tashkent, Uzbe Ristan, Union of Soviet Socialist Republics.

92218. No. 174. From Pisidia Isparta, Asia Minor.

92219. No. 175. From the Agricultural Experiment Station, Pisidia Isparta, Asia Minor.

Nos. 92220 to 92235 were collected in the Union of Soviet Socialist Republics.

92220. MORUS CAUCASICA Hort. Moraceae. Mulberry.

No. 148. Collected in the Tiflis Botanic Garden, Georgia. A very sweet-flavored aromatic fruit, superior to others found.

92221. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

No. 149. Collected at Dshelaloglu, Armenia, June 17, 1930. A very fine large fruit produced in the steppe region at 4,000 feet altitude.

92222. PRUNUS ARMENIACA L. Amygdalaceae. Apricot.

No. 156. Collected at Erivan, June 20, 1930. A freestone apricot of medium-to-large size and very fine texture and flavor.

92223 to 92231. ONOBRYCHIS VULGARIS Hill (*O. viciaefolia* Scop.). Fabaceae. Sanfoin.

92223. No. 150. A large type, originally from Afghanistan, but collected in Valki, near Kharkof, Ukraine.

92224. No. 201. From the Loribambakski region, Armenia.

92225. No. 176. From Zangezursk, Karakilis, Armenia.

92226. No. 177. Turkestan selection.

92199 to 92245—Continued.

92227. No. 178. Turkestan selection.

92228. No. 179. Turkestan selection.

92229. No. 180. Turkestan selection.

92230. No. 202. From Ukraine.

92231. No. 203. From Azerbaijan.

92232. LATHYRUS SATIVUS L. Fabaceae. Bittervetch.

No. 152. From Kharkof, Ukraine. A large leafy plant which matures early.

92233. LATHYRUS SATIVUS L. Fabaceae. Bittervetch.

No. 153. From Kharkof, Ukraine. An early dwarf plant, very leafy.

92234. LOLIUM PERSICUM Boiss. and Hohen. Poaceae. Ryegrass.

No. 191. From Erivan, Armenia. Collected in high hills in a very hot and dry region. An annual grass closely resembling *Lolium multiflorum.*

92235. PUNICA GRANATUM L. Punicaceae. Pomegranate.

No. 185. From Tiflis, Georgia. A large sweet fruit.

92236. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

No. 181. From Trebizond, Asiatic Turkey, October 5, 1930. Beans grown commonly on the hillsides in the Black Sea region with corn in the same field.

92237. PHASEOLUS VULGARIS L. Fabaceae. Common bean.

No. 186. From Bela Slatina, Bulgaria, October 14, 1930. Field beans.

92238. CUCUMIS MELO L. Cucurbitaceae. Melon.

No. 182. From Istanbul, Turkey. Collected October 9, 1930. The *Turkish sugar* melon. A long slender green-gray melon with little mottling; very sweet. It is much prized by the peasants in the Black Sea region.

92239. CUCUMIS MELO L. Cucurbitaceae. Melon.

No. 183. Collected at Istanbul, Turkey, October 9, 1930. *Turkish sugar* melon. A round green melon, mottled with white, cultivated in the Black Sea region. Not so sweet as the preceding, No. 182 [92238], but of good flavor.

92240. HIPPOPHAE RHAMNOIDES L. Elaeagnaceae. Common sea-buckthorn.

No. 184. Collected in the Caucasus Mountains.

For previous introduction and description see 92105.

Nos. 92241 to 92245 were collected in the Union of Soviet Socialist Republics.

92241. VICIA sp. Fabaceae. Vetch.

No. 197. Collected near Erivan, Armenia, June 20, 1930, in a dry canyon at 950 feet altitude. An early vetch.

92242. VICIA VILLOSA Roth. Fabaceae. Hairy vetch.

92199 to 92245—Continued.

No. 200. A variety which branches from the roots when the top is cut. The seed pods do not shatter.

92243. SCORZONERA sp. Cichoriaceae.

No. 205. From Baku, Azerbaijan, June 13, 1930. A plant found on dry lava soils which produces 15 per cent of good quality rubber.

92244. (Undetermined.)

No. 155. An ornamental legume, resembling a lupine, which is winter hardy at Kharkof, Ukraine.

92245. VICIA BITHYNICA L. Fabaceae. **Vetch.**

No. 154. Collected at Erivan, Armenia, June 21, 1930. A winter field pea with hairy pods and foliage which makes an excellent growth on dry soil.

For previous introduction see 50315.

92246. PINUS KORAIENSIS Sieb. and Zucc. Pinaceae. **Korean pine.**

From Chosen, Japan. Seeds presented by the Government General of Chosen. Received March 24, 1931.

From the Forest Experiment Station, Keijo, Chosen. A 5-needle pine, up to 100 feet high, native to Chosen and Japan. It produces valuable lumber and edible seeds and is also of ornamental value, being slow in growth and forming a dense broad pyramidal head of handsome foliage.

For previous introduction see 82483.

92247. TECOMA CHRYSOTRICHA Mart. Bignoniaceae.

From Brazil. Seeds presented by Mrs. Ynes Mexia, Vicosa, Minas Geraes, through W. T. Swingle, Bureau of Plant Industry. Received March 24, 1931.

Pau Mulato. A small to medium-sized tree which grows in the open or in partial shade. The handsome canary-yellow flowers, with red-streaked throats, open in early spring while the tree is still leafless. It grows just below the frost line in Minas Geraes, at about 2,000 feet altitude.

92248. CANNA EDULIS Ker. Cannaceae. **Edible canna.**

From the Union of Soviet Socialist Republics. Seeds presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures, Leningrad. Received March 24, 1931.

No. 129050. A close relative to the ornamental cannas, cultivated for its edible tuber.

For previous introduction see 80543.

92249 to 92258.

From Chiapas, Mexico. Seeds and scions collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received March 25, 1931.

92249. CITRUS AURANTIUM L. Rutaceae. **Seville orange.**

No. 55. Seeds of a sour orange, collected February 22, 1931, near Acala, from a tree 10 to 15 feet high, growing wild.

92249 to 92258—Continued.

92250. GOSSYPIUM sp. Malvaceae. **Cotton.**

No. 38. *Culluche.* Seeds collected February 18, 1931, at Tuxtla Gutierrez. An interesting small-bolled cotton with short brown lint, which is without economic importance except that it is proof against the boll weevil. The bolls are protected by a proliferation much more complete than any other cotton thus far studied.

92251 to 92258. CITRUS spp. Rutaceae.

Nos. 92251 to 92257 are scions of cultivated trees collected near Acala, February 21, 1931, at 2,800 feet altitude.

92251 to 92253. CITRUS AURANTIFOLIA (Christm.) Swingle. **Lime.**

92251. No. 47. *Lima.* A tree 10 feet high with white flowers.

92252. No. 48. *Lima.* A tree 10 feet high, flowers white.

92253. No. 49. *Lima naranja.* Tree 15 feet high.

92254. CITRUS SINENSIS (L.) Osbeck. **Orange.**

No. 52. Tree 15 feet high. This is the commonly cultivated orange of this region.

92255. CITRUS AURANTIFOLIA (Christm.) Swingle. **Lime.**

No. 53. A tree of good type.

92256. CITRUS MEDICA L. **Citron.**

No. 54. Tree 15 feet high.

92257. CITRUS AURANTIUM L. **Seville orange.**

No. 55a. A sour-orange tree 10 to 15 feet high, growing wild. Seeds of this tree were given the number 92249.

92258. CITRUS SINENSIS (L.) Osbeck. **Orange.**

No. 82. Scions collected at Tenejapa, west of San Cristobal, February 28, 1931, at 3,500 feet altitude. A sweet orange of excellent quality, said to be the best in this region.

92259. BERBERIS BEANIANA C. Schneid. Berberidaceae. **Barberry.**

From France. Seeds presented by Prof. D. Bois, Paris Museum of Natural History, Paris. Received March 26, 1931.

A Chinese shrub with long yellow spines, yellow flowers, and purple ellipsoidal fruits.

For previous introduction see 76213.

92260 to 92273. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From China. Seeds presented by the Director, College of Agriculture, National University of Peiping. Received March 26, 1931.

Seeds grown at the experiment farm of the Chinese Eastern Railway at Echo.

92260. No. 1.
92261. No. 2.
92262. No. 3.
92263. No. 4.
92264. No. 5.
92265. No. 6.
92266. No. 7.
92267. No. 8.
92268. No. 9.
92269. No. 10.
92270. No. 11.
92271. No. 12.
92272. No. 13.
92273. No. 14.

92274. PHOENIX TOMENTOSA Hort. Phoenicaceae. **Palm.**

From the Canary Islands. Seeds presented by Wildpret Bros., Port Orotava, Teneriffe. Received March 26, 1931.

A name for which a description has not been found. The seeds closely resemble those of *Phoenix reclinata.*

92275. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Canada. Seeds purchased from Henry Reid, County Agronomist for Soulanges Vaudreuil, Vaudreuil Station, Province of Quebec. Received March 27, 1931.

Red clover, grown by Wilfred Besner, St. Clet, Soulanges County. This variety has been grown on the same farm for the past 15 years.

92276 to 92280.

From England. Plants purchased from J. Cheal & Sons (Ltd.), Crawley, Sussex. Received March 27, 1931.

92276 to 92279. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

92276. *Albo pleno.*

92277. *Benifugen.*

92278. *Cheal's weeping.*

92279. *Shirofugen.*

92280. PHILADELPHUS VIRGINALIS Rehder. Hydrangeaceae. **Mockorange.**

A shrub 3 to 6 feet high with ovate remotely dentate leaves and racemes of large double or semidouble white flowers. It is a garden hybrid.

92281. FRAGARIA sp. Rosaceae. **Strawberry.**

From England. Plants purchased from Thomas Swarbrick, Agricultural Research Station, Long Ashton, Bristol. Received March 27, 1931.

Royal Sovereign. A very early everbearing strain, robust, hardy, with large foliage; fruit very large, of brisk luscious flavor and shipping well.

92282 to 92287.

From England. Plants purchased from Burkwood & Shipwith (Ltd.), Kingston-on-Thames, Surrey. Received March 27, 1931.

92282. CEANOTHUS sp. Rhamnaceae.

Autumnal blue. A rapid-growing evergreen with dark shiny foliage and large spikes of intense blue flowers which are produced throughout the whole of September. It is hardy in the south of England.

92283. CEANOTHUS sp. Rhamnaceae.

Burkwoodii. The indigo-blue flower spikes are much larger than the type and are borne continuously during the autumn months.

92284. DAPHNE CAUCASICA Pall. Thymelaeaceae. **Caucasian daphne.**

A hardy deciduous shrub, up to 4 feet high, with lanceolate leaves and fragrant white flowers in terminal heads of 3 to 20 flowers. Native to the Caucasus region.

For previous introduction see 81830.

92282 to 92287—Continued.

92285. DAPHNE BLAGAYANA Freyer. Thymelaeaceae. **Balkan daphne.**

A low diffusely branched shrub, native to the mountains of southeastern Europe. The obovate leaves, 1 to 2 inches long, are crowded at the end of the branchlets, and the yellowish white fragrant flowers, borne in heads, are followed by globose pinkish-white fruits.

For previous introduction see 80432.

92286. OSMAREA BURKWOODII Hort. Oleaceae.

This new bigeneric hybrid, a cross between *Osmanthus delavayii* and *Phillyrea decora,* is a fine hardy evergreen, with pendulous flowers, ivory white and very fragrant.

92287. VIBURNUM BURKWOODII Hort. Caprifoliaceae.

This new hybrid between *Viburnum utile* and *V. carlesii* is a strong-growing very hardy evergreen with shiny green foliage and, in April, large panicles of fragrant white flowers, which are pink in the bud.

92288. VICIA FABA L. Fabaceae. **Broadbean.**

From Tokyo, Japan. Seeds presented by First Lieut. Joseph J. Twitty, Corps of Engineers, U. S. Army, American Embassy. Received March 27, 1931.

Otafuku mame. A large, well-flavored, edible bean which is used for canning by the Japanese, very much as we can the navy bean in the United States.

92289. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From Union of South Africa. Seeds presented by A. Ford & Co., Johannesburg, through Prof. A. R. Pullen, University of Pretoria, Pretoria, Transvaal. Received March 28, 1931.

Makataan melon. A native melon which is very drought resistant but not sweet. It is used in the western part of the Transvaal as cattle feed.

92290 to 92302.

From the Union of Soviet Socialist Republics. Seeds presented by A. Kol, Chief, Bureau of Introduction, Institute of Applied Botany and New Cultures, Leningrad. Received March 28, 1931.

92290 and 92291. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Kasakstan, Alma Ata. Collected in the Alatau Mountains by Kostina in 1930.

92290. No. 127829.

92291. No. 127404.

92292 to 92302. RUBUS spp. Rosaceae.

92292. RUBUS ARCTICUS L.

A bramble, native to Manchuria, with medium-sized red edible berries.

For previous introduction see 69167.

92293. RUBUS CAESIUS L. **Dewberry.**

A deciduous shrub with slender creeping prickly stems, which are covered with a whitish bloom when young. The leaves, usually composed of three

92290 to 92302—Continued.

leaflets, are green on both sides. The white flowers are in small clusters, and the fruit, composed of a few large carpels, is covered with a blue-white bloom when ripe. It is common thoroughout Europe and northern Asia, but is of no value for gardens.

For previous introduction see 42639.

92294. RUBUS CHAMAEMORUS L.

The cloudberry is of circumpolar distribution, and the edible yellowish fruits are much prized by the natives of the subarctic regions. The plant is creeping in habit and is frequently found in peat bogs.

For previous introduction see 55370.

92295. RUBUS GLANDULOSUS Bellardi.

A name for which a description is not available.

For previous introduction see 78324.

92296. RUBUS IDAEUS L. **European raspberry.**

The plant is a strong, upright grower, everbearing in habit. The fruit is large, red, and of excellent quality.

For previous introduction see 58806.

92297. RUBUS ILLECEBROSUS Focke. **Strawberry raspberry.**

A dwarf prickly undershrub 2 to 4 feet high with pinnate leaves made up of five to seven oblong-lanceolate doubly serrate leaflets and small clusters of large white flowers nearly 2 inches across, followed by large scarlet fruits. It is native to Japan.

92298. RUBUS PARVIFLORUS Nutt. (*R. nutkanus* Mocc.). **White-flowering raspberry.**

An upright shrub 6 to 8 feet high, with reniform 3-lobed to 5-lobed leaves 4 to 8 inches across, dense corymbs of small white flowers one-fourth inch wide, and red fruits more than half an inch in diameter. It is native to western North America.

92299. RUBUS ODORATUS L. **Flowering raspberry.**

An upright shrub up to 10 feet high, with cordate leaves 4 to 12 inches broad having five triangular lobes and many-flowered panicles of purple fragrant flowers 2 inches across. The flat red fruits are less than an inch across. It is native to the eastern United States.

92300. RUBUS PHOENICOLASIUS Maxim. **Wineberry.**

For previous introduction and description see 91832.

92301. RUBUS SAXATILIS L. **Dewberry.**

A dewberry producing large bright-red fruits of good quality.

For previous introduction see 68824.

92302. RUBUS XANTHOCARPUS Bur. and Franch.

A climber, 1 to 4 feet long, sparsely prickly or unarmed, which dies to the ground every year. The edible fruit is composed of many golden drupes. It is cultivated for the fruit in Lithuania. Native to central and northwestern China.

For previous introduction see 53540.

92303. ACTINIDIA CHINENSIS × ARGUTA. Dilleniaceae.

Plants growing at the United States Plant Field Station, Glenn Dale, Md. Numbered in November, 1930.

Unfruited plants from a cross made by David Fairchild in the hope of combining all the better characters of each parent.

92304 and 92305. FICUS CARICA L. Moraceae. **Common fig.**

From France. Plants purchased from Vilmorin-Andrieux & Co., Paris. Received March 3, 1930. Numbered in March, 1931.

92304. *Blanche d'Argenteuil.*

92305. *Dauphine.*

92306 to 92313.

From the Union of Soviet Socialist Republics. Seeds presented by the director of the subtropical section of the Institute of Applied Botany and New Cultures, Sukhum, Abkhasia Republic, through A. Kol, Chief, Bureau of Introduction, Leningrad. Received March 30, 1931.

92306 to 92308. CANNA spp. Cannaceae.

92306. CANNA ANGUSTIFOLIA L.

No. 41000. A canna with red flowers, native to Brazil.

92307. CANNA EDULIS Ker. **Edible canna.**

No. 6832.

For previous introduction and description see 92248.

92308. CANNA INDICA L.

No. 41009. A low slender-stemmed tropical American canna, 3 to 5 feet high, with green oblong leaves about 1 foot long and simple lax racemes of small flowers. The latter have pale-green narrow petals, a reddish-yellow lip, and bright-red upper staminodia.

For previous introduction see 66714.

92309. CORYLUS COLURNA L. Betulaceae. **Turkish hazel.**

No. 19768. *Lagodekhi.* A vigorous free-growing tree up to 60 feet high, with stout more or less horizontal branches, heart-shaped glossy green leaves 5 inches long, and small hard-shelled nuts inclosed in fleshy hairy green involucres.

For previous introduction see 86263.

92310. CARICA sp. Papayaceae.

No. 34434.

92311. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

No. 4483.

92312. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

No. 4485.

92313. ZELKOVA CARPINIFOLIA (Pall.) Dipp. Ulmaceae. **Elmleaf zelkova.**

No. 19771. A tree up to 75 feet high, native to the Caucasus region, with crenately serrate dark-green obovate leaves 2 to 6 inches long, resembling those of the hornbeam.

For previous introduction see 79149.

92314 to 92319. IRIS spp. Iridaceae.

From England. Seeds purchased from R. Wallace & Co. (Ltd.), Tunbridge Wells. Received March 30, 1931.

92314. IRIS BULLEYANA Dykes. **Hollowstem iris.**

An iris from western China with a hollow unbranched stem. The narrow leaves are glossy above and glaucous beneath. The stem, 15 to 18 inches long, bears a single head of one to two flowers. The falls have a greenish-yellow oblong haft, veined and dotted with purple. On the obovate blade the coloring becomes clearer and consists of broken veins and blotches of bright blue purple on a creamy ground. The extremity is a uniform blue purple, paler at the edges. The oblanceolate channeled standards are pale blue purple with deeper veins and diverge at an angle of about 60°. The keeled dark-purple styles are held high above the falls.

For previous introduction see 67364.

92315. IRIS CHRYSOGRAPHES Dykes. **Goldvein iris.**

One of the handsomest of the beardless irises; the velvety dark-purple flowers are brightened by golden reticulations at the throat, running into a signal patch on the blade.

For previous introduction see 79029.

92316. IRIS CLARKEI Baker. **Clarke iris.**

A curiously local Himalayan iris, native to a circumscribed area in the Sikkim and Bhutan region at altitudes between 6,000 and 11,000 feet, in ground that is swampy half the year and frozen hard under snow during most of the remaining months. The narrow leaves, 2 feet long, droop at the tops; the upper surface is polished and shiny, the under side glaucescent. The solid stem is 2 feet long and bears one or two lateral heads. The falls are blue purple blotched with white and are reflexed laterally. The upper part of the haft is marked with yellow. The reddish-purple lanceolate standards are poised horizontally. The styles form the highest point of the flower; they are keeled, very convex, and 1½ inches long.

For previous introduction see 86681.

92317. IRIS GRAMINEA L. **Grass iris.**

A dwarf beardless iris with strongly ribbed linear leaves 12 to 18 inches long and flowers with lilac outer segments having a yellow claw and erect red-purple style branches and inner segments. The plant is of value chiefly for its freesialike scent. Native to central and southern Europe.

For previous introduction see 81821.

92318. IRIS MILESII Baker. **Himalayan iris.**

A semievergreen Himalayan iris, related to *Iris tectorum,* with seven or eight leaves 2 to 3 feet long on the tall flower stem; the latter is branched and bears about four heads of small rosy lilac flowers, more or less spotted with darker magenta.

For previous introduction see 79030.

92319. IRIS WILSONI Wright. **Wilson iris.**

A western Chinese iris 2 feet high, with yellow flowers having falls veined with purple.

For previous introduction see 76252.

92320. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

From Austria. Seeds presented by Fred E. Kies, Jackson, Mo. Received March 30, 1931.

An early-flowering strain, said to be resistant to drought.

92321 to 92325. ACACIA spp. Mimosaceae.

From San Remo, Italy. Plants presented by Dr. Mario Calvino. Received May 27, 1931.

A collection of acacias grafted on *A. floribunda* for winter blooming.

92321. ACACIA sp.

Bon Accueil. Improved No. 561. One of the best varieties.

92322. ACACIA sp.

Bon Accueil. Improved F No. 1796. One of the best varieties.

92323. ACACIA sp.

Gaulois. Considered the best for the cut-flower industry.

92324. ACACIA sp.

Montaldo. A cross between *Acacia podalyriaefolia* and *A. dealbata.* It is better than *A. hanburyana.*

92325. ACACIA sp.

Rustica. One of the best-flowered varieties.

92326 to 92332.

From Australia. Seeds presented by F. W. Fricke, Melbourne, through H. E. Magill, Pasadena, Calif. Received March 31, 1931.

92326 to 92331. ACACIA spp. Mimosaceae.

92326. ACACIA BUXIFOLIA A. Cunn.

For previous introduction and description see 90838.

92327. ACACIA BAILEYANA F. Muell. **Cootamundra wattle.**

A shrub or small tree with compound leaves made up of two to three pairs of pinnae having about 20 pairs of small leaflets arranged spirally around the branchlets and nearly concealing them. The small flowers are in heads arranged in racemes 2 to 4 inches long. It is native to Australia.

92328. ACACIA HEMOLOPHERA Hort.

A name for which a place of publication and a description have not been found.

92329. ACACIA MOLLISSIMA Willd. **Black wattle.**

A tree up to 50 feet high with reddish bark showing under the fissures. The compound leaves are made up of 8 to 20 pairs of pinnae each having 30 to 60 pairs of small, closely crowded leaflets. The small heads of pale-yellow flowers are in racemes and appear profusely in June and intermittently at other times. It is native to Australia.

92330. ACACIA RETINODES Schlecht.

A tall shrub or small tree, native to Australia, with feathery foliage and dense yellow flower heads.

For previous introduction see 68836.

92326 to 92332—Continued.

92331. ACACIA TERMINALIS (Salisb.) Macbride.

An Australian tree up to 60 feet high, with golden pubescent branchlets, pinnately compound leaves, and globular heads of yellow flowers in clusters 6 inches long.

For previous introduction see 76858.

92332. ALBIZZIA LOPHANTHA (Willd.) Benth. Mimosaceae. **Plume albizzia.**

A shrub or small tree up to 20 feet high, with compound leaves made up of 14 to 24 pairs of pinnae each bearing 60 pairs of small linear leaflets. The small yellow flowers are in spikes about 2 inches long. It is native to Australia.

For previous introduction see 52895.

92333 to 92336.

From Argentina, South America. Seeds presented by Dr. Lorenzo R. Parodi, Laboratorio de Botanica, Facultad de Agronómica y Veterinaria, Buenos Aires. Received March 31, 1931.

A collection of South American grasses, introduced for testing as forage crops.

92333. CALAMAGROSTIS VIRIDI-FLAVESCENS (Poir.) Steud. Poaceae. **Grass.**

92334. CHLORIS BERROI Arech. Poaceae. **Grass.**

92335. LAMPROTHYRSUS HIERONYMI (Kuntze) Pilger. Poaceae. **Grass.**

92336. PASPALUM GAYANUM Desv. Poaceae. **Grass.**

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 107

Washington, D. C. ▼ Issued May 1933

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, APRIL 1 TO JUNE 30, 1931 (Nos. 92337–93748)

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INTRODUCTORY STATEMENT

The plant introductions for the period from April 1 to June 30, 1931 (Nos. 92337 to 93748), include the results of several expeditions, as well as the additions that are being regularly made to several collections of genera that are receiving the particular attention of workers of this division.

From an expedition sent to Mexico particularly to study and collect wild potatoes that should be useful in breeding disease-resistant new varieties, many other useful plants were collected, among them the fiber-producing kapok. Nos. 92341 to 92373 represent the final collections from Erlanson and Souviron.

The Dorsett and Morse exploration in the Orient, while primarily concerned with the collection of soybeans, procured many other interesting seeds and plants. Soybeans from this source are recorded in this inventory by 205 introductions (Nos. 92556–92734, 93050–93060, 93557–93571). The next largest collection is represented by various squashes, pumpkins, gourds, luffas, and related vegetables from native markets (Nos. 92807–92837, 92841–92852, 93003–93044; Peter Liu later sent Nos. 93436–93459). In addition to these, various types of onion, spinach, tomato, and other vegetables and persimmons were collected for department specialists.

Through the cooperation of Allison V. Armour, who has assisted in other plant-hunting expeditions, several department specialists were able to search for cottons and cotton relatives through Mexico and Lower California, bringing back many interesting wild forms (Nos. 92884, 92885, 92900–92916) as well as papayas, annonas, and other tropical fruits. The cotton collection was also increased by the collections of Doyle and Taylor in the West Indies (Nos. 93496–93527).

A final shipment of plant material, in some cases northern types of plants native to the United States, originally collected in Canada by Ryerson, Alderman, and Leslie, was forwarded from the temporary Canadian nursery (Nos. 93144–93152).

The additions made to the permanent collections, on which work is being done by various department and division specialists, include a collection of new varieties of oriental cherries (Nos. 92487–92489, 92503–92506, 92523–92546, 92756); several new bamboos (Nos. 92508–92511, 93223–93225); Casuarina, 10 species, of which 6 are new introductions, for special study in Florida; Ficus, both fruiting and ornamental types (Nos. 92948–92955, 93271–93273); palms from

the Royal Botanic Gardens, Peradeniya, Ceylon (Nos. 93317–93319, 93321–93326, 93399–93418), and seven varieties collected by Doyle and Taylor in the West Indies (Nos. 93528, 93530–93533, 93535, 93536); grapes, including native types sent through the cooperation of the Institut Agricole de l'Algérie, Maison Carrée (Nos. 92412–92459), and through H. Brayard (Nos. 92765–92769); wheats through Parker from the Union of Soviet Socialist Republics (Nos. 92377–92393), from France (Nos. 92394–92405), from R. J. Lathbury, Plant Breeder, Plant Breeding Station, Njoro, Kenya Colony (Nos. 92471–92477); corn through J. G. Dickson from the Union of Soviet Socialist Republics (Nos. 93623–93747); as well as numerous smaller collections of ornamentals from many sources.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., August 2, 1932.

INVENTORY[1]

92337 to 92340.

From Argentina, South America. Seeds presented by Dr. Lorenzo R. Parodi, Laboratorio de Botanica, Facultad de Agronómica y Veterinaria, Buenos Aires. Received April 1, 1931.

92337. AXONOPUS IRIDACEUS (Mez) Parodi. Poaceae. **Grass.**

Of possible value as forage.

92338 to 92340. POA spp. Poaceae. **Grass.**

92338. POA BONARIENSIS (Lam.) Kunth.

No. 455. A rhizomatous perennial grass.

For previous introduction see 76885.

92339. POA LANIGERA Nees.

No. 456. Of possible value as forage.

92340. POA LIGULARIS Nees.

No. 450. Of possible value as forage.

92341 to 92373.

From Mexico. Seeds collected by C. O. Erlanson and Max Souviron, Bureau of Plant Industry. Received April 1, 1931.

Nos. 92341 to 92365 were collected in the State of Chiapas.

92341. ANNONA MURICATA L. Annonaceae. **Soursop.**

No. 57. *Guanava.* Collected near Acala at 2,800 feet altitude. A tree 40 feet high which was found on irrigated land. The tree is cultivated for its soft-spine fruit.

92342. ARDISIA sp. Myrsinaceae.

No. 103. Collected at Chiapas, March 4, 1931. A tree 45 feet high, used as a shade tree on the plaza.

92341 to 92373—Continued.

92343. BIXA ORELLANA L. Bixaceae. **Anatto-tree.**

No. 56. Collected near Acala at 2,800 feet altitude, February 22, 1931. A tree 25 feet high found growing in open scrub. It is sometimes used as a hedge. The berries furnish a yellow coloring matter for butter and cheese.

For previous introduction see 76416.

92344. CEIBA sp. Bombacaceae.

No. 107. *Mosmote.* Collected in the dry valley of Tuxtla Gutierrez, March 4, 1931, where it was growing abundantly.

92345. CESTRUM sp. Solanaceae.

No. 88. Collected along the road between San Cristobal and Tenejapa, February 28, 1931, at 3,900 feet altitude. A bush up to 15 feet high with white berries.

92346. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 34. Collected in the market at Tuxtla Gutierrez, February 17, 1931. This variety, that came originally from Spain, produces small elliptic fruits.

92347. DAHLIA sp. Asteraceae.

No. 89. Collected along the road between San Cristobal and Tenejapa, February 28, 1931, at 3,900 feet altitude. A herbaceous plant up to 30 feet high.

92348. DIALIUM DIVARICATUM Vahl. Caesalpiniaceae.

No. 98. *Unpace.* Collected in the mountains north of Tuxtla Gutierrez, March 2, 1931. The endocarp of the nut of this tree is used by the natives in making a refreshing drink.

92349. ERYTHRINA GOLDMANII Standl. Fabaceae.

No. 102. *San Felipe.* Found growing among dry scrub near Chiapas, March 4,

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus of related genera. The responsibility for the identifications, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

92341 to 92373—Continued.

1931. A small tree about 15 feet high with red flowers.

92350. FICUS sp. Moraceae. **Fig.**

No. 39. From the market at Tuxtla Gutierrez, February 17, 1931. A small wild edible fig.

92351. FUCHSIA SPLENDENS Zucc. Onagraceae.

No. 83. Collected on the road between San Cristobal and Tenejapa, February 28, 1931, at 3,500 feet altitude. A much-branched ornamental shrub about 5 feet high. The single drooping flowers, over an inch long, are scarlet with greenish yellow tips and greenish petals. The tube is over twice the length of the calyx lobes; the pointed petals half as long as the tube; the stamens are much exserted, and the anthers are yellow.

92352. GAULTHERIA NITIDA Benth. Ericaceae.

No. 87. An evergreen shrub or small tree with oblong-ovate leaves 1 to 4 inches long and racemes 2 to 4 inches long of small pink flowers. It is native to Mexico.

92353. GYROCARPUS AMERICANUS Jacq. Hernandiaceae.

No. 105. Collected in dry scrub about Chiapas, March 4, 1931. A tree up to 60 feet high with thick branches, alternate, long-petioled, palmately lobed leaves, and broad cymes of small flowers said to be white, followed by ribbed fruits 1 inch long with two obovate wings 3 inches long. It is native to Mexico and throughout the Tropics.

92354. JACQUINIA PUNGENS A. Gray. Theophrastaceae.

No. 36. Collected in the mountains near Tuxtla Gutierrez, February 18, 1931, at 3,000 feet altitude. A small ornamental evergreen tree or shrub 8 to 10 feet high with sharp-pointed shining leaves. The small fragrant orangelike fruits are bright yellow and over 1 inch in diameter, and, when macerated, are thrown into the water to poison fish.

92355. LEUCOPREMNA MEXICANA (A. DC.) Standl. (*Jacaratia mexicana* A. DC.). Papayaceae.

No. 67. *Boneta* or *papaya silvestre*. A wild papaya collected near the Chiapas River at Acala, February 22, 1931, at 1,200 feet altitude. A tree with a smooth tapering trunk and many slender branches. The leaves are palmately seven parted, and the fruits, about 6 inches long, are five winged, each wing terminating in an incurved spur at the base. The sweetish edible fruits are preserved with sugar. It is native to Mexico and other parts of tropical America.

92356. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 80. Variety *cerasiforme*. From the market at San Cristobal, February 27, 1931. A small tomato about one-fourth inch in diameter.

92357 to 92363. PHASEOLUS spp. Fabaceae. **Bean.**

92357. PHASEOLUS COCCINEUS L. **Scarlet runner.**

92358. PHASEOLUS LUNATUS L. **Lima bean.**

92341 to 92373—Continued.

92359 to 92363. PHASEOLUS VULGARIS L. **Common bean.**

92359. *Bollito.*

92360. *Negro.*

92361. *Orotello.*

92362. *Pinto.*

92363. *Rosa.*

92364. PINUS OOCARPA Scheide. Pinaceae. **Pine.**

No. 60. Collected between Acala and San Cristobal, February 24, 1931, at 6,000 feet altitude. A white pine up to 60 feet high, with a round, compact head and stout branches and bright-green leaves, usually in fives, 7 to 11 inches long. The cones, 2 to 4 inches long, are persistent, pendent or spreading, and are ocher yellow, often tinged with gray or green. Native to western and central Mexico.

For previous introduction see 81428.

92365. PITHECOCTENIUM ECHINATUM (Jacq.) Schum. Bignoniaceae. **Mexican monkeycomb.**

No. 106. *Canoita*. Collected near Chiapas, March 4, 1931. A small tree about 10 feet high with red flowers, found growing in dry scrub.

92366. PITHECOLLOBIUM DULCE (Roxb.) Benth. Mimosaceae. **Gaumachil.**

From the market at Coyoacan, Mexico, D. F., and presented by Mrs. Zelia Nuttall, March 4, 1931. A large, stately tree with pinnate leaves composed of obovate or oblong leaflets 1 inch long; the white flowers, finely pubescent, are followed by twisted pods 5 or 6 inches long and over 1 inch wide. It is widely cultivated in the Tropics as an ornamental. The pulpy aril of the seed is eaten by the poorer classes as a food. The bark yields a yellow dye.

92367. RHUS SCHIEDEANA Schlecht. Anacardiaceae. **Sumac.**

No. 61. Collected at La Laguna, between Acala and San Cristobal, Chiapas, February 24, 1931, at 6,000 feet altitude. A shrub 10 feet high, much like the mountain-ash, found growing among oak and pine.

92368. RUBUS ADENOTRICHOS Schlecht. Rosaceae.

No. 72. Collected above San Andres, northwest of San Cristobal, Chiapas, February 26, 1931, at 2,000 feet altitude. A bush about 5 feet tall with pink flowers and black berries.

92369. SOLANUM AMAZONIUM Ker. Solanaceae.

No. 27. Collected near Navojoa, Sonora, January 18, 1931, at 150 feet altitude. A stellate-pubescent shrub 3 feet high, armed with slender prickles, ovate to oblong, sinuate-lobate leaves densely stellate-tomentose beneath; clusters of blue or violet flowers 1 to 2 inches across, and prickly fruits about half an inch in diameter. It is native to Mexico.

Nos. 92370 to 92372 were collected in the mountains near Tuxtla Gutierrez, Chiapas, February 18, 1931, at 3,000 feet altitude.

92341 to 92373—Continued.

92370. STERCULIA APETALA (Jacq.) Karst. Sterculiaceae.

No. 35. *Castaño.* A handsome tree up to 60 feet high, found growing in open shrub. It is used as an avenue tree throughout Mexico and Central America. The pods contain edible seeds which are enjoyed by children.

For previous introduction see 54535.

92371. SWIETENIA HUMILIS Zucc. Meliaceae. **Mahogany.**

No. 100. A deciduous tree up to 40 feet high with subsessile leaflets and light-brown seeds. The tree is a rapid grower and often forms pure stands; the hard dark red wood is used locally for furniture, canoes, and other purposes; it is not known to be exported in any quantity.

92372. VIROLA sp. Myristicaceae.

No. 90. *Chauisoj.* Presented by Almado Zabadua, March 2, 1931. A tree whose seeds when once ignited burn with the steady light of a candle. They are used for this purpose by the natives.

92373. (Undetermined.)

No. 66. Collected near La Laguna, between Acala and San Cristobal, February 24, 1931, at 6,000 feet altitude. A shrub about 8 feet high with a capsule which looks like a small apple.

92374 and 92375.

From Java. Seeds presented by the director, Botanic Garden, Buitenzorg. Received April 1, 1931.

92374. CASUARINA RUMPHIANA Miquel. Casuarinaceae.

A rather scraggly tree with very slender delicate green pendent branches and cones having few seeds. Native to Java.

For previous introduction see 67679.

92375. CASUARINA SUMATRANA Jungh. Casuarinaceae.

A handsome shrub sometimes over 6 feet high and densely branched. The branches, twigs, and little twigs are three angled, very slender, destitute of leaves, gracefully arched, sometimes pendent, forming by their union plumy masses or a kind of "foxtail," the whole of a deep shining green. As these twigs are leafless, they retain their plumy lightness for a long time.

For previous introduction see 74474.

92376 to 92393.

From the Union of Soviet Socialist Republics. Seeds presented by the Bureau of Introduction, Leningrad, through Dr. John H. Parker, Kansas Agricultural Experiment Station. Received April 1, 1931.

92376. HORDEUM DISTICHON NUDUM L. Poaceae. **Two-rowed barley.**

No. 26965.

92377 to 92384. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

92377. No. 3001.
92378. No. 9446.
92379. No. 9449.
92380. No. 9450.

92376 to 92393—Continued.

92381. No. 10244.
92382. No. 35681.
92383. No. 36032.
92384. No. 118337.

92385 to 92393. TRITICUM DURUM Desf. Poaceae. **Durum wheat.**

92385. No. 2995–a.
92386. No. 2996–a.
92387. No. 3000.
92388. No. 10245.
92389. No. 17485.
92390. No. 17486.
92391. No. 35680.
92392. No. 41069.
92393. No. 41073.

92394 to 92405. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From France. Seeds presented by the Station de Sélection de Montfort l'Amany, through Dr. John H. Parker, Kansas Agricultural Experiment Station. Received April 1, 1931.

92394. *Blé des Alliés.*

92395. *Bon Fermier.*

92396. *Flèche d'Or.*

92397. *Galluis Trente.*

92398. *Goldendrop L 184.*

92399. *Goldendrop* type.

92400. *Leverson.*

92401. *Oscar Benoist.*

92402. *Yeoman variation Montfort.*

92403. *Hybride I × I.*

92404. *Hybride Vilmorin 23.*

92405. *Hybride N. R.*

92406. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From South Africa. Seeds purchased from H. E. V. Pickstone & Bro. (Ltd.), Simondium, Cape of Good Hope Province. Received April 1, 1931.

Variety *Pucelle de Malines.*

92407 to 92409. LILIUM spp. Liliaceae. **Lily.**

From England. Bulbs presented by W. L. Constable, Paddock Wood, Kent. Received April 2, 1931.

92407. LILIUM BAKERIANUM Coll. and Hemsl.

A lily with a gray-green stem 3 to 4 feet high, scattered, ascending, linear to lanceolate leaves 2 to 3 inches long, and one to six nodding, fragrant, campanulate flowers 2 to 3 inches broad, opening greenish yellow and changing to creamy white, heavily spotted inside with chocolate purple. It is native to Burma and western China.

92408. LILIUM NEPALENSE D. Don.

A showy lily, native to the central Himalayas, with a slender erect stem, 2 to 3 feet long, leafy to the inflorescence. The glossy, bright-green leaves, 4 to 6 inches in length, are oblong-lanceolate and five ribbed. The flowers, 4 to 5 inches long, are greenish yellow outside and yellow within, and flushed, except in the upper third, with purplish black. The oblanceolate segments are reflexed

92407 to 92409—Continued.

only in the upper half. The purple-black filaments bear yellow anthers nearly an inch long.

For previous introduction see 52925.

92409. LILIUM WALLICHIANUM Schult. f.

A lily 4 to 6 feet high, with linear leaves 6 to 9 inches long, and usually solitary creamy waxy white fragrant flowers 9 inches long, which are golden yellow at the base inside and green outside.

For previous introduction see 80013.

92410. CITRUS AURANTIFOLIA (Christm.). Swingle. Rutaceae. **Lime.**

From Manzanilla, Mexico. Bud wood collected by J. H. Kempton, of the Allison V. Armour expedition to the West Indies and Mexico. Received April 3, 1931.

Bud wood of a very aromatic lime, collected March 25, 1931.

92411. COMMIPHORA sp. Balsameaceae.

From India. Seeds presented by Capt. D. S. Corlett, California Botanic Garden, Los Angeles, Calif. Received April 3, 1931.

Collected from trees growing in a stony sandy soil in a semiarid region which is very hot by day and very cold at night.

The commiphoras are balsamiferous, spiny trees or shrubs with alternate, compound leaves of one to five sessile, crenate, or serrate leaflets, small greenish axillary flowers, and small, oval, drupelike fruits. Various species yield gum resins which are known as myrrh. These plants are native to India, Arabia, and Africa.

92412 to 92459. VITIS VINIFERA L. Vitaceae. **European grape.**

From Algeria, Africa. Cuttings presented by the Institut Agricole de l'Algérie, Maison Carrée. Received April 1, 1931.

92412. *Adari 2. Beni ourtilane guerjour.*

92413. *Adari 3. Beni ourtilane guerjour.*

92414. *Adari 3. Cheria guerjour.*

92415. *Agourane 5. Beni Aissi.*

92416. *Ain Beugra.* Berry dark black, medium, spherical; skin having a heavy bloom; pulp firm; cluster long, cylindrical, well filled; peduncle long, green and brittle; petiole long and slender; leaf resembles Grenache, but is a duller green; vine vigorous, large, and late.

92417. *Ain Kelb.* Berry golden yellow, medium size, round, skin veined; cluster rather large, compact; stem having strong peduncle; leaf large, thick, orbicular; vine very vigorous and regularly fruitful; ripens August 1.

92418. *Akhal 2. Bou Saada.*

92419. *Aneb Bou bezzoul.*

92420. *Aneb el Amar.*

92421. *Aneb el Korchi.*

92422. *Amellalt 9. Beni Aissi.*

92423. *Amoussiah 7. Beni Aissi.*

92424. *Beni Aissi 5.*

92425. *Beni Ferach 1.*

92426. *Beni ourtilane 2. Guerjour.*

92412 to 92459—Continued.

92427. *Beni ourtilane 7.*

92428. *Bezoulat el Kelba.* Berry golden yellow, large, twice as long as wide, ellipsoidal; pulp crisp, sweet, of good flavor; seeds numerous and large; cluster conic-cylindrical and of good size.

92429. *Bou Saada 3. Asili.*

92430. *Bou Saada 4.*

92431. *Bou Saada 5.*

92432. *Boukerdous 13.*

92433. *Boutziri 10. Beni Aissi.*

92434. *Cheria 1. Guerjour est.*

92435. *Chikhio 1. Bou Saada.*

92436. *Coudsi.*

92437. *El Bordj.*

92438. *El Main 4. Bilaus.*

92439. *Falera Beni Aissi.*

92440. *Fagrarasse 2.*

92441. *Famellalt 2. Tghil Ali.*

92442. *Fassifit 1. Tghil Ali.*

92443. *Fissefin 1. Beni ourtilane.*

92444. *Fourtrissin 4.*

92445. *Fsimeskieni 5. Cheria.*

92446. *Ladari Beni Ferah.*

92447. *Makfoul 1. Bilaus.*

92448. *Orléansville Corchet 34.*

92449. *Orléansville Farana 27.*

92450. *Orléansville Rose 36.*

92451. *Orléansville Rose 38.*

92452. *Oul b'ouzgueur 3. Beni Aissi.*

92453. *Oul b'ouzgueur 3. Tghil Ali.*

92454. *Oul b'ouzgueur 5.*

92455. *Oul b'ouzgueur 6.*

92456. *Raisin Blanc 2. El Main.*

92457. *Tghil Ali 4.*

92458. *Thizourin n'Fahar arassi.*

92459. *Bezoul el Kadem.* The foliage is incised with very pointed teeth. "Kadem" means slave, negress.

92460 to 92470. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From the Union of Soviet Socialist Republics. Seeds presented by Station Ostrada, Agricultural Experiment Station of the All-Union Institute of Applied Botany and the Department of Agriculture. Received April 4, 1931.

92460. From the Ussur country.

92461. From Gunchjulinsky Primorskaya Experiment Station.

92462. From the Transcaucasus.

92463. From the northern Caucasus.

92464. *Kpynyrs No. 9/3 Ceb. Manrmypud.*

92465. No. 111. *Xapsunchoe onormnoe.*

92466. No. 118. From the Charbin Experiment Field, Mandjur.

92460 to 92470—Continued.

92467. No. 199. *Xapsunchoe onormnoe.*

92468. No. 231a. *Xapsunchoe onormnoe.*

92469. No. 306. *Konyeccur Dpyear.*

92470. No. 911. *Konyeccur Dpyear.*

92471 to 92477. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Kenya, Africa. Seeds presented by R. J. Lathbury, Plant Breeder, Plant Breeding Station, Njoro. Received April 6, 1931.

92471. *Equator.* The only variety grown at the higher altitudes between 8,000 and 9,000 feet. Highly resistant to yellow rust, but susceptible to stem rust forms Nos. 17 and 21. A heavy yielder that matures in 7½ months at 9,000 feet. Sown with the start of the rains in April to June and harvested in the dry season from December to February. This variety originated as a selection from a field of wheat growing on a farm called Equator at Njoro. Sometimes known locally as K. 1.

92472. *Kenya Governor.* Grown at altitudes up to 7,000 feet. Too susceptible to yellow rust at higher altitudes. Resistant to one form, No. 17, of stem rust, but susceptible to form 21. Resistant to leaf rust. Matures in four months at 5,000 feet. A useful stopgap, but one that will fall out of cultivation as new rust-resistant varieties are produced.

92473. *Kenya Standard.* Similar to *Kenya Governor,* but is resistant to both physiologic forms of stem rust, Nos. 17 and 21; susceptible to leaf rust. Does not yield as well as *Kenya Governor,* but has stronger straw and tighter chaff.

92474. *B. F_2 36 C. 1* (*L.*). Similar to *Kenya Governor* and with the same stem-rust resistance, but a better yielder. Little of this variety is grown.

92475. *K. 2 R. 5* (*L. 2*). A new Njoro wheat which is resistant to forms Nos. 17 and 21 of stem rust and also to yellow rust. It matures in 5½ to 6 months at 7,000 feet altitude and in 6 to 6½ months at higher altitudes.

92476. *Golden Ball.* A wheat grown at 7,000 to 8,000 feet altitude. It is susceptible to all rusts, but generally gives a crop. Not largely grown. It originated from South Africa, where it is known as *Groot Korn.* Matures in six months.

92477. *K. 2 G. 6 A. 9* (*L.*). A new Njoro wheat which is resistant to forms Nos. 17 and 21 of stem rust. It matures in 5½ to 6 months at 7,000 feet altitude and in 6 to 6½ months at higher altitudes.

92478 to 92486. CASUARINA spp. Casuarinaceae.

From Australia. Seeds presented by Dr. Alexander McTaggart, Senior Plant Introduction Officer, Canberra. Received April 6, 1931.

A collection of casuarinas native to Australia.

92478 to 92486—Continued.

92478. CASUARINA DECUSSATA Benth.

A small tree closely resembling *Casuarina torulosa,* with slender elongated branches arranged in fours, but the angles are very acute, and two of them are more prominent than the others.

92479. CASUARINA FRASERIANA Miquel.

A tall erect shrub or small tree closely related to *Casuarina distyla,* with leafless, rigid branches and with the leaves represented by very small scales in whorls.

For previous introduction see 73914.

92480. CASUARINA HUEGELIANA Miquel.

A shrub or small tree, native to Western Australia, with round branchlets arranged in whorls of 8 to 12.

92481 and 92482. CASUARINA INOPHLOIA Muell. and Bail.

A small tree with loose fibrous bark and thin slightly streaked branchlets in whorls of seven to nine. It is native to Queensland.

92481. Collected in New South Wales; No. S–219.

92482. Collected in Queensland; No. S–208.

92483. CASUARINA LEPIDOPHLOIA F. Muell.

A small or moderately large tree with very slender, linear, faintly angled branchlets. The cones are depressed, globose, and about 1 inch in diameter. This casuarina has hitherto been confused with *C. glauca.*

92484. CASUARINA LUEHMANNI R. T. Baker.

A tree 80 to 100 feet high, with light-colored branchlets and flattened cones half an inch in diameter. The wood is hard and close-grained.

For previous introduction see 74696.

92485. CASUARINA SUBEROSA Otto and Dietr.

A species with very large fruits (1½ inches) and long coarse pendent branchlets, very distinct from *Casuarina equisaetifolia.*

For previous introduction see 62663.

92486. CASUARINA TORULOSA Ait.

The wood of this tree is close-grained and very prettily marked. It is used for shingles and also as veneer for cabinetwork.

For previous introduction see 49854.

92487 to 92489. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

From England. Plants purchased from R. C. Notcutt, Woodbridge, Suffolk. Received April 6, 1931.

92487. Variety *Kojima.* A Japanese flowering cherry with very large semi-double, pure white fragrant flowers which are somewhat campanulate; these are produced in a long-stemmed drooping corymb. The tree is very vigorous and a rapid grower.

For previous introduction see 62101.

92487 to 92489—Continued.

92488. Variety *Ojochin* (*Senriko*). A wide-spreading tree with brownish-gray bark; the young foliage is coppery green, and the flowers, single or nearly so, are white with a pink blush, fragrant, and about 2 inches across, with usually three or four in a cluster. The petals are slightly wrinkled, giving the flowers the appearance of being semi-double.

For previous introduction see 69085.

92489. Variety *Shirofugen*. Tree up to 25 feet high, wide-spreading in habit, with dark-brownish bark. The very young foliage is dull mahogany red, with the same hue shading the deep-cerise, truncate flower buds. The clear-pink, double flowers, up to 2½ inches across, become white with age, and are in drooping clusters of three or four. From the center of the flower protrude 2 or sometimes 3 to 5 leaf-like pistils. On the Pacific coast this variety has been grown under the name of *Victory*.

92490 to 92501.

From England. Seeds presented by the director, Botanic Garden, Cambridge. Received April 6, 1931.

92490. ALLIUM FARRERI W. T. Stearn. Liliaceae. **Onion.**

An onion, native to Siku, China, with 4 to 6 linear leaves 10 to 15 inches long and lax umbels of 6 to 30 campanulate red-purple flowers.

92491. BERBERIS CHITRIA D. Don. Berberidaceae. **Barberry.**

A spiny half-evergreen shrub, 6 feet or less high, with oblong leaves 1 to 3 inches long, deep-yellow or reddish flowers in long-stemmed panicles, and ovoid purple berries. It is native to the Himalayas.

For previous introduction see 73530.

92492. BERBERIS EMPETRIFOLIA Pers. Berberidaceae. **Crow barberry.**

A low densely branched barberry, native to southern South America, 1 or 2 feet high, with linear, bright-green leaves and bluish-black fruits.

For previous introduction see 79507.

92493. ILEX INTEGRA Thunb. Aquifoliaceae. **Holly.**

An evergreen Japanese shrub or tree, up to 40 feet in height, with oval or oblong, usually entire leaves 2 to 3 inches long and globular or ovoid red berries.

For previous introduction see 67361.

92494 to 92496. IRIS spp. Iridaceae.

92494. IRIS BULLEYANA Dykes. **Hollowstem iris.**

An iris from western China which resembles *Iris clarkei*, except that the stem is hollow. The narrow leaves are glossy above and glaucous beneath, and the stem, 15 to 18 inches long, bears a single head of one or two flowers. The falls have a greenish-yellow oblong haft, veined and dotted with purple. On the obovate blade the coloring becomes clearer and consists of broken veins and blotches of bright blue purple on a creamy ground. The extremity is a uniform blue purple, paler at the edges. The oblanceolate, channeled standards are pale blue purple with deeper veins, and they diverge at an angle of about 60°. The keeled, dark-purple styles are held high above the falls.

92490 to 92501—Continued.

For previous introduction see 67364.

92495. IRIS CHRYSOGRAPHES Dykes. **Goldvein iris.**

One of the handsomest of the beardless irises; the velvety dark-purple flowers are brightened by golden reticulations at the throat, running into a single patch in the blade.

For previous introduction see 79029.

92496. IRIS WILSONI Wright. **Wilson iris.**

An iris from western China, about 2 feet high. The flowers are yellow with some purple venation in the falls.

For previous introduction see 92319.

92497. NOTHOSCORDUM BIVALVE (L). Britton (*N. striatum* Kunth.). Liliaceae.

A bulbous perennial with linear basal leaves and a scape about 1 foot high, bearing an umbel of small yellow flowers.

92498 to 92500. PRIMULA spp. Primulaceae. **Primrose.**

92498. PRIMULA FLORIBUNDA Wall.

Variety *Isabellina*. A form with sulphur-yellow flowers.

92499. PRIMULA FLORINDAE K. Ward.

A Tibetan primrose about 3 feet high, one of the Sikkimensis section, with fragrant, cowslip-yellow flowers in an immense head of 60 to 80 flowers. The very large leaves resemble those of *Caltha palustris* in shade, and the plant grows near running streams.

For previous introduction see 79103.

92500. PRIMULA HELODOXA Balf.

A large Chinese primrose of the section Candelabra, with flower stalks like those of *P. japonica*, about 3 feet high, which have seven or eight tiers of soft-yellow flowers resembling in color and size those of *Jasminum primulinum*. It requires a moist but well-drained site and a fairly mild climate.

For previous introduction see 79105.

92501. ZEPHYRANTHES ANDERSONI (Herb.) Baker. Amaryllidaceae.

A bulbous perennial, native to Argentina, with narrowly linear, pale-green leaves 6 inches long and a scape as long as the leaves bearing a lilylike flower 1 inch long, bright yellow inside and coppery red outside.

92502. ENCEPHALARTOS LEMARINELIANUS Wildem. and Dur. Cycadaceae.

From Africa. Seeds presented by A. Corbisier-Baland, directeur, Jardin Botanique d'Eala, Belgian Congo. Received April 8, 1931.

A cycad 3 to 7 feet high with compound leaves 2 to 3 feet long, made up of 18 to 22 rigid, coriaceous, glaucous, lanceolate leaflets 3 to 6 inches long It is native to tropical Africa.

92503 to 92511.

From England. Plants purchased from V. N. Gauntlett & Co. (Ltd.), Chiddingfold, Surrey. Received April 8, 1931.

92503 to 92506. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

92503. Variety *Manoga.* Flowers double and soft pink.

92504. Variety *Osaka.* Flowers double, pale rose changing to white.

92505. Variety *Snowflake.* A new Japanese cherry with large snow-white, fluffy flowers.

92506. Variety *Wakihito.* The double flowers are red in the bud, opening to a deep rich rose.

92507. THAMNOCALAMUS FALCONERI Hook. f. Poaceae. **Bamboo.**

Falconer bamboo. This was received under the name *Arundinaria falconeri,* but the absence of tessellation (cross venation) in the leaves excludes it from Arundinaria. It bears a resemblance to some of the forms of *Bambusa nana* and probably is about as hardy as this species. The culm is cylindrical. The branches on a young plant are 8 to 12 at a node, variable in length, usually without branchlets, exceedingly slender, often purplish in color, and with four to seven leaves gathered near the tips. The leaves are lanceolate, 1½ to 4 inches long by three-sixteenths to about three-eights of an inch wide. The slenderness of the branches gives this bamboo a distinctive beauty.

92508. SASA VARIEGATA (Sieb.) E. G. Camus (*Arundinaria fortunei* Riviere). Poaceae. **Bamboo.**

Variety *fortunei.* A hardy dwarf bamboo with attractive green and white striped leaves. There are up to about 12 leaves on a branch, and they range up to 4 inches long by three-eighths of an inch wide. The species grows to a height of 12 to 18 inches and spreads rather rapidly by means of underground rhizomes.

92509. ARUNDINARIA GAUNTLETTI Hort. **Bamboo.**

A name for which a place of publication has not been found. On a greenhouse-grown plant there are up to seven lanceolate leaves on a branch. They are from 2 to 6 inches long by three-eighths to three-fourths of an inch wide. The tessellation is rather open.

92510. SASA VEITCHII (Carr.) Rehder. Poaceae. **Bamboo.**

Received as *Bambusa palmata,* which name is now considered to be a synonym of *Sasa tessellata.* The plants agree more closely, however, with those received from the Kew Gardens as *S. veitchii.* The young plants have three to four broadly lanceolate leaves on a branch, and these are up to 4¾ inches long by seven-eighths of an inch wide. The secondary veins are very prominent, and the tessellation is rather close. *S. veitchii* grows to a height of about 4 feet, and the rhizomes are of running habit, as in the hardy bamboos.

92511. PHYLLOSTACHYS PUBERULA (Miquel) Munro (*P. henonis* Mitf.). Poaceae. **Bamboo.**

92503 to 92511—Continued.

Japanese name, *Hachiku.* A hardy giant bamboo of running habit, native to Japan and China, which reaches ultimately, under favorable conditions, a height of 50 or 60 feet. The leaves, usually two to four on a branchlet, are commonly 2½ to 3½ inches long by one-fourth to three-eighths of an inch wide. The fresh culm sheaths are plain mauve, tipped with brilliant green pseudophyllis, giving the young sprouts as they come up in the spring an appearance of singular beauty. The sprouts are edible.

92512 to 92517. ALLIUM CEPA L. Liliaceae. **Onion.**

From Australia. Seeds presented by John Douglas, Field Branch, Department of Agriculture, Sydney, New South Wales. Received April 9, 1931.

92512. *Early flat cape.* A South African variety.

Nos. 92513 to 92517 are local selections which have done exceptionally well under all conditions in New South Wales.

92513. *Early Hunter River* (brown).

92514. *Hunter River Brown Spanish.*

92515. *Hunter River* (white).

92516. *Long Keeping Brown Spanish.*

92517. *McKim.*

92518 to 92522.

From Spain. Plants purchased from Juan Levya, La Quinta, Granada. Received April 9, 1931.

92518. PRUNUS AVIUM L. Amygdalaceae. **Sweet cherry.**

Rizado de Quentar.

92519 to 92521. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

92519. *Fertile de Poiton.*

92520. *Champion.*

92521. *Triumph.*

92522. POPULUS NIGRA BETULIFOLIA (Pursh) Torr. Salicaceae. **Poplar.**

Chopo. A form of poplar, striking because of the almost complete absence of true lateral branches, the stems being clothed with twigs which, as is common in poplars, are sooner or later thrown off by separative layers near the base. Because of this habit of growth the trees can be planted very close together, yielding an enormous amount of wood, as they are rapid growers.

For previous introduction see 33206.

92523 to 92546. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

From Japan. Plants purchased from the Yokohama Nursery Co., Yokohama. Received April 9, 1931.

A collection of Japanese flowering cherries received under the following names:

92523. *Beni-gamo.*

92524. *Daizen-zakura.*

92525. *Higurashi.*

92526. *Hi-zakura.*

92523 to 92546—Continued.

92527. *Hoki-zakura.*

92528. *Horaisan.*

92529. *Ito-kubiri.*

92530. *Kiku-shidare.*

92531. *Kirigaya.*

92532. *Ko-fugen.*

92533. *Koko-no-ye-zakura.*

92534. *Naden.*

92535. *Nara-zakura.*

92536. *Okiku-zakura.*

92537. *Oku-miyako.*

92538. *O-naden.*

92539. *O-sho-kun.*

92540. *Ruiran.*

92541. *Sakon.*

92542. *Sum-zome.*

92543. *Temari-zakura.*

92544. *Udzu-zakura.*

92545. *Yedo-zakura.*

92546. *Yo-ki-hi.*

92547. CASSIA sp. Caesalpiniaceae.

From Brownsville, Tex. Seeds presented through R. A. Young, Bureau of Plant Industry. Received April 9, 1931.

A silvery leaved, pendulous shrub.

92548 to 92554. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From Scotland. Tubers presented by William Black, Scottish Society for Research in Plant Breeding, Craigs House, Corstorphine, Midlothian. Received April 10, 1931.

A collection of tubers introduced for the use of specialists interested in potato breeding.

92548. No. 220 (52).

92549. No. 249s (31).

92550. No. 236 (8).

92551. *Papa sylvestra.*

92552. No. 70 (13).

92553. No. 120 (53).

92554. No. 135 (10).

92555. ZEA MAYS L. Poaceae. **Corn.**

From Alindao, Ubangi Chari Territory, French Equatorial Africa. Seeds presented by Elizabeth Hermann, Mission Evangélique. Received April 11, 1931.

Bangou, or white corn, which matures in two months. The natives plant it near swamps at the beginning of the dry season, and in the rainy season they plant it in stony ground near the fertile ant hills. It yields two ears in good ground, but only one in less fertile situations.

For previous introduction see 91651.

92556 to 92734. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Manchuria, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 10, 1931.

Received from the South Manchuria Railway Experiment Station, Kungchuling, Manchuria, February 25, 1931.

92556. No. 7751. A medium-small bean, nearly round, greenish yellow with black hilum and yellow germ.

92557. No. 7752. A medium-large, oval, slightly flattened green bean with brown hilum and green germ.

92558. No. 7753. A medium-large, oval, glossy olive-green bean with pale hilum.

92559. No. 7754. A medium-large green bean, oval, slightly flattened, and semiglossy with a brown hilum.

92560. No. 7755. A medium-sized bean, flattened, glossy, and yellowish brown. It is very similar to the Virginia.

92561. No. 7756. A medium-sized, oval, slightly flattened olive-yellow bean with pale hilum.

92562. No. 7757. A mixed sample of semiglossy smoky yellow oval beans with brown hilum, small to medium in size.

92563. No. 7758. A medium small, oval, glossy, light-yellow bean with brown hilum.

92564. No. 7759. A medium-sized, oval, semiglossy, light-yellow bean with pale hilum.

92565. No. 7760. A medium-sized, oval, semiglossy, light-yellow bean with pale hilum.

92566. No. 7761. A medium-sized, oval, semiglossy, light-yellow bean with brown hilum.

92567. No. 7762. A medium-large, oval, light-yellow bean with pale hilum.

92568. No. 7763. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92569. No. 7764. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92570. No. 7765. Medium-small to medium-sized, oval, semiglossy, yellow beans with pale hilum.

92571. No. 7766. Medium-sized, oval, semiglossy, light-yellow beans with pale hilum.

92572. No. 7767. Medium-sized, oval, semiglossy, light-yellow beans with pale hilum.

92573. No. 7768. Medium-sized, oval, glossy, light-yellow beans with pale hilum.

92574. No. 7769. A medium-sized, oval, light-yellow bean with pale hilum.

92575. No. 7770. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92576. No. 7771. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92577. No. 7772. A medium-sized, oval, light-yellow bean with pale hilum.

92578. No. 7773. A medium-sized, nearly round, semiglossy yellow bean with pale hilum.

92556 to 92734—Continued.

92579. No. 7774. A medium-sized, oval, slightly flattened, very light-yellow bean with pale hilum.

92580. No. 7775. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92581. No. 7776. A medium-sized, oval, semiglossy, yellow bean with pale hilum.

92582. No. 7777. An oval, semiglossy, light-yellow bean of medium size with pale hilum.

92583. No. 7778. An oval, semiglossy, yellow bean which is medium small to medium in size with a pale hilum.

92584. No. 7779. A medium-sized, nearly round, semiglossy light-yellow bean with brown hilum.

92585. No. 7780. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92586. No. 7781. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92587. No. 7782. A medium-small to medium-sized, nearly round, yellow bean with brown hilum.

92588. No. 7783. Medium-small to medium-sized, nearly round, light-yellow beans with brown hilum.

92589. No. 7784. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92590. No. 7785. A medium-sized, nearly round, semiglossy, light-yellow bean with small brown hilum.

92591. No. 7786. A nearly round yellow bean of medium small to medium size with a brown hilum.

92592. No. 7787. A nearly round, semiglossy, yellow bean of medium size with small brown hilum.

92593. No. 7788. A nearly round, semiglossy, yellow bean of medium size with brown hilum.

92594. No. 7789. A nearly round, semiglossy, light-yellow bean with brown hilum.

92595. No. 7790. A nearly round semiglossy, light-yellow bean with brown hilum.

92596. No. 7791. A medium-sized, nearly round, semiglossy, yellow bean with brown hilum.

92597. No. 7792. A medium-sized, nearly round, semiglossy, light-yellow bean with pale hilum.

92598. No. 7793. An oval, semiglossy, light-yellow bean of medium-large size with brown hilum.

92599. No. 7794. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92600. No. 7795. A medium-sized, nearly round, glossy, yellow bean with brown hilum.

92601. No. 7796. An oval, glossy yellow bean of medium size with brown hilum.

92602. No. 7797. A nearly round, semiglossy, light-yellow bean of medium size with small brown hilum.

92556 to 92734—Continued.

92603. No. 7798. Medium-sized, oval to nearly round, semiglossy, light-yellow beans with brown hilum.

92604. No. 7799. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92605. No. 7800. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92606. No. 7801. A medium-sized, nearly round, semiglossy, light-yellow bean with small brown hilum.

92607. No. 7802. A medium-sized, nearly round, semiglossy, yellow bean with brown hilum.

92608. No. 7803. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92609. No. 7804. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92610. No. 7805. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92611. No. 7806. A medium-sized, nearly round, glossy, light-yellow bean with brown hilum.

92612. No. 7807. A medium-sized, nearly round, glossy, yellow bean with brown hilum.

92613. No. 7808. A medium-sized, nearly round, semiglossy, light-yellow bean with small brown hilum.

92614. No. 7809. A medium-sized, nearly round, glossy, yellow bean with brown hilum.

92615. No. 7810. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92616. No. 7811. A medium-sized, nearly round, semiglossy, yellow bean with brown hilum.

92617. No. 7812. A nearly round, semiglossy, yellow bean of medium size with brown hilum.

92618. No. 7813. A nearly round, semiglossy, light-yellow bean of medium size with brown hilum.

92619. No. 7814. A nearly round, semiglossy, light-yellow bean of medium size with brown hilum.

92620. No. 7815. A nearly round, semiglossy, yellow bean with small brown hilum.

92621. No. 7816. A medium-sized, nearly round, glossy, yellow bean with rather small brown hilum.

92622. No. 7817. Oval to nearly round, semiglossy, light-yellow beans of medium size with brown hilum.

92623. No. 7818. An oval, semiglossy, light-yellow bean of medium size with brown hilum.

92624. No. 7819. An oval, light-yellow bean of medium size with brown hilum.

92625. No. 7820. Oval, slightly flattened, light-yellow beans, which vary in size from medium small to medium, with brown hilum.

92556 to 92734—Continued.

92626. No. 7821. Oval, light-yellow beans which vary in size from medium small to medium, with light-brown hilum.

92627. No. 7822. A medium-sized, oval, glossy, light-yellow bean with light-brown hilum.

92628. No. 7823. An oval, slightly flattened, light-yellow bean of medium size with dark-brown hilum.

92629. No. 7824. An oval, glossy, light-yellow bean of medium size with dark-brown hilum.

92630. No. 7825. An oval, glossy yellow bean of medium size with brown hilum.

92631. No. 7826. Oval, slightly flattened, glossy, light-yellow beans varying in size from medium small to medium; hilum, brown.

92632. No. 7827. Oval, slightly flattened, semiglossy, yellow beans which vary in size from medium to medium large; hilum, light brown.

92633. No. 7828. A medium-sized, oval, slightly flattened, semiglossy, very light-yellow bean with light-brown hilum.

92634. No. 7829. A medium-sized, oval, light-yellow bean with brown hilum.

92635. No. 7830. A medium-sized, oval, slightly flattened yellow bean with brown hilum.

92636. No. 7831. A medium-sized, oval, slightly flattened, light-yellow bean with pale hilum.

92637. No. 7832. Oval, slightly flattened, light-yellow beans which vary in size from medium small to medium; hilum, large and dark brown.

92638. No. 7833. A medium-sized, oval, light-yellow bean with large, dark-brown hilum.

92639. No. 7834. A medium-sized, oval, light-yellow bean with large dark-brown hilum.

92640. No. 7835. A medium-sized, oval, light-yellow bean with large dark-brown hilum.

92641. No. 7836. A medium-sized, oval, semiglossy, yellow bean with large dark-brown hilum.

92642. No. 7837. A medium-sized, oval, slightly flattened, light-yellow bean with large dark-brown hilum.

92643. No. 7838. Oval, light-yellow beans which vary in size from medium small to medium, with rather large brown hilum.

92644. No. 7839. A medium-sized, oval, slightly flattened, semiglossy, yellow bean with brown hilum.

92645. No. 7840. Oval, slightly flattened, light-yellow beans varying in size from medium to medium large with brown hilum.

92646. No. 7841. A medium-sized, oval, slightly flattened, semiglossy, light-yellow bean with large brown hilum.

92647. No. 7842. A medium-sized, oval, glossy, light-brown bean with brown hilum.

92556 to 92734—Continued.

92648. No. 7843. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92649. No. 7844. Oval, slightly flattened, semiglossy, light-yellow beans which vary in size from medium small to medium; hilum, light brown.

92650. No. 7845. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92651. No. 7846. Nearly round, semiglossy, light-yellow beans which vary in size from medium small to medium; hilum, brown.

92652. No. 7847. A medium-sized, oval, semiglossy, light yellow bean with brown hilum.

92653. No. 7848. A bean of medium size, nearly round, semiglossy, light yellow, and with a brown hilum.

92654. No. 7849. A medium-small, oval, glossy, light-yellow bean with pale hilum.

92655. No. 7850. A medium-sized, nearly round, semiglossy, yellow bean with large black hilum.

92656. No. 7851. A medium-sized, nearly round, semiglossy, light-yellow bean with large black hilum.

92657. No. 7852. A medium-sized, oval, slightly flattened yellow bean with large, very dark-brown hilum.

92658. No. 7853. A medium-small, nearly round, semiglossy, yellow bean with large black hilum.

92659. No. 7854. A bean of medium size, oval, yellow with black hilum.

92660. No. 7855. A medium-sized, nearly round, semiglossy, light-yellow bean with slate-black hilum.

92661. No. 7856. A medium-large, nearly round, light-yellow bean with light slate-black hilum.

92662. No. 7857. A medium-sized, nearly round, glossy, light-yellow bean with light slate-black hilum.

92663. No. 7858. An oval, glossy, yellow bean which varies in size from medium small to medium; hilum, brown.

92664. No. 7859 A medium-sized, oval, semiglossy, light-yellow bean with brown hilum.

92665. No. 7860. Oval to nearly round, light-yellow beans varying in size from medium small to medium; hilum, pale brown.

92666. No. 7861. A medium-sized, nearly round, semiglossy, yellow bean with light-brown hilum.

92667. No. 7862. A medium-sized, nearly round, light-yellow bean with light-brown hilum.

92668. No. 7863. A medium-sized, nearly round, semiglossy, light-yellow bean with light-brown hilum.

92669. No. 7864. A medium-sized, nearly round, light-yellow bean with light-brown hilum.

92670. No. 7865. A medium-sized, nearly round, pale-yellow bean with light-brown hilum.

92556 to 92734—Continued.

92671. No. 7866. A medium-sized, nearly round, light-yellow bean with light-brown hilum.

92672. No. 7867. A medium-sized, nearly round, light-yellow bean with light-brown hilum.

92673. No. 7868. A medium-sized, nearly round, light-yellow bean with brown hilum.

92674. No. 7869. A medium-sized, nearly round, light-yellow bean with light-brown hilum.

92675. No. 7870. A medium-sized, nearly round, semiglossy, light-yellow bean with brown hilum.

92676. No. 7871. Nearly round, yellow beans which vary in size from medium to medium large; hilum, light brown.

92677. No. 7872. A medium-sized, nearly round, pale-yellow bean with light-brown hilum.

92678. No. 7873. A medium-sized, oval, semiglossy, pale-yellow bean with light-brown hilum.

92679. No. 7874. A medium-sized, oval, pale-yellow bean with light-brown hilum.

92680. No. 7875. A medium-sized, oval, semiglossy, pale-yellow bean with pale-brown hilum.

92681. No. 7876. A medium-sized, nearly round, semiglossy, yellow bean with light-brown hilum.

92682. No. 7877. A medium-sized, oval, pale-yellow bean with pale hilum.

92683. No. 7878. A medium-sized, oval, pale-yellow bean with pale hilum.

92684. No. 7879. A medium-sized, oval, slightly flattened, pale-yellow bean with pale hilum.

92685. No. 7880. A medium-sized, oval, light-yellow bean with pale hilum.

92686. No. 7881. A medium-sized, oval, semiglossy, pale-yellow bean with pale hilum.

92687. No. 7882. A very light-yellow, oval bean of large size with pale hilum.

92688. No. 7883. A light-yellow, oval bean of medium size with pale hilum.

92689. No. 7884. A pale-yellow, oval bean of medium size with pale hilum.

92690. No. 7885. A medium-sized, oval, light-yellow bean with pale hilum.

92691. No. 7886. Oval, light-yellow beans which vary in size from medium to medium large; hilum, pale.

92692. No. 7887. Oval, slightly flattened, light-yellow beans of medium-large size with light-brown hilum.

92693. No. 7888. A medium-sized, oval, pale-yellow bean with pale hilum.

92694. No. 7889. Oval, slightly flattened, semiglossy, pale-yellow beans of medium-large size with pale hilum.

92695. No. 7890. Medium large, oval, slightly flattened, semiglossy, pale-yellow beans with pale hilum.

92696. No. 7891. A medium-sized, oval, semiglossy, pale-yellow bean with pale hilum.

92556 to 92734—Continued.

92697. No. 7892. A medium-sized, oval, semiglossy, pale-yellow bean with pale hilum.

92698. No. 7893. Oval, slightly flattened, light-yellow beans which vary in size from medium to medium large; hilum, pale.

92699. No. 7894. Oval, light-yellow beans which vary from medium to large in size; hilum, pale.

92700. No. 7895. A medium-large, oval, semiglossy, yellow bean with pale hilum.

92701. No. 7896. A medium-sized, nearly round, semiglossy, yellow bean with pale hilum.

92702. No. 7897. Oval, glossy yellow beans which vary from medium to medium large in size; hilum, brown.

92703. No. 7898. A medium-sized, oval, cloudy brown bean with yellow germ.

92704. No. 7899. Oval, semiglossy yellow beans, medium to medium large in size, with light-brown hilum.

92705. No. 7900. A medium-sized, oval, glossy yellow bean with light-brown hilum.

92706. No. 7901. A medium-sized, oval, slightly flattened yellow bean with light-brown hilum.

92707. No. 7902. A medium-large, nearly round, light-yellow bean with brown hilum.

92708. No. 7903. Oval, semiglossy, pale-yellow beans which vary in size from medium to medium large; hilum brown and rather small.

92709. No. 7904. A nearly round, semiglossy, yellow bean of medium size with light-brown hilum.

92710. No. 7905. A medium-sized, nearly round, yellow bean with brown hilum.

92711. No. 7906. A medium-large, oval, slightly flattened, glossy light-yellow bean with pale hilum.

92712. No. 7907. A medium-sized, oval, pale-yellow bean with large dark-brown hilum.

92713. No. 7908. Oval light-yellow beans, medium to medium large in size with rather large, dark-brown hilum.

92714. No. 7909. A medium-sized, oval, slightly flattened, yellow bean with large dark-brown hilum.

92715. No. 7910. A medium-sized, oval, pale-yellow bean with rather large brown hilum.

92716. No. 7911. A medium-sized, oval, pale-yellow bean with rather large brown hilum.

92717. No. 7912. A medium-sized, oval, pale-yellow bean with rather large dark-brown hilum.

92718. No. 7913. A medium-large, oval, slightly flattened, pale-yellow bean with rather large brown hilum.

92719. No. 7914. A medium-large, oval, slightly flattened, light-yellow bean with large dark-brown hilum.

92720. No. 7915. A medium-sized, oval, pale-yellow bean with brown hilum.

92556 to 92734—Continued.

92721. No. 7916. A medium-sized, oval, yellow bean with brown hilum.

92722. No. 7917. An oval, slightly flattened, light-yellow bean of medium size; hilum, brown.

92723. No. 7918. An oval, pale-yellow bean of medium size with rather large black hilum.

92724. No. 7919. An oval, pale-yellow bean of medium size with very light-brown hilum.

92725. No. 7920. A medium-large, oval, slightly flattened, pale-yellow bean with light-brown hilum.

92726. No. 7921. An oval, slightly flattened, pale-yellow bean of medium size; hilum, dark brown and rather large.

92727. No. 7922. An oval, slightly flattened, yellow bean of medium size with rather large brown hilum.

92728. No. 7923. A medium-sized, oval, light-yellow bean with large dark-brown hilum.

92729. No. 7924. Oval to nearly round, light-yellow beans varying in size from medium to medium large; hilum, light brown.

92730. No. 7925. Nearly round, light-yellow beans of medium size with small brown hilum.

92731. No. 7926. Oval, slightly flattened, light-yellow beans varying in size from medium to medium large with pale hilum.

92732. No. 7927. A medium-sized, oval, cloudy yellow bean with pale hilum.

92733. No. 7928. A medium-small, nearly round, black bean with green germ.

92734. No. 7929. Oval, light-yellow beans which vary in size from medium to medium large; hilum, pale.

92735 to 92762.

From England. Plants purchased from the Hon. Vicary Gibbs, through Edwin Beckett, Aldenham House Gardens, Elstree, Herts. Received April 10, 1931.

92735. ABELIA TRIFLORA R. Br. Caprifoliaceae.

A shrub, native to the Himalayan region, up to 15 feet high with corrugated bark, ovate-lanceolate leaves 2 to 3 inches long, and terminal clusters of rosy white, fragrant flowers.

For previous introduction see 76552.

92736 and 92737. BUXUS SEMPERVIRENS L. Buxaceae. **Common box.**

Dwarf, slow-growing varieties, introduced by Murray Hornibrook, said to be suitable for rockeries.

92736. Form 1. **92737.** Form 2.

92738 to 92743. COTONEASTER spp. Malaceae.

92738. COTONEASTER ALDENHAMENSIS Hort.

Seedlings raised from a magnificent new cotoneaster which forms a large bush of graceful arching, branched growths. The leaves are large and handsome, and the large bright-red berries are abundantly produced in large clusters.

92735 to 92762—Continued.

For previous introduction see 76730.

92739. COTONEASTER HEBEPHYLLA Diels.

A graceful shrub or low tree with spreading branches, white flowers, and many dull-red fruits.

For previous introduction see 76232.

92740. COTONEASTER LINDLEYI Steud.

A tall-growing shrubby plant, native to the Himalayas, with long slender young branches, medium-sized oval leaves, and round black fruits.

For previous introduction see 76235.

92741. COTONEASTER MOUPINENSIS Franch.

A tall shrub with rather large glossy leaves and jet-black berries.

For previous introduction see 62570.

92742. COTONEASTER OBSCURA Rehd. and Wils.

A western Chinese shrub, about 10 feet high, with ovate dull-green leaves, short dense cymes of pinkish flowers, and dark-red pear-shaped fruits.

For previous introduction see 76238.

92743. COTONEASTER RUBENS W. W. Smith.

A nearly prostrate Chinese shrub, 2 to 4 feet high, with small orbicular leaves and small axillary red flowers.

For previous introduction see 76239.

92744 to 92747. ESCALLONIA spp. Escalloniaceae.

New varieties raised by Mr. Slinger at Donard.

92744. ESCALLONIA sp.

Donard beauty. A lovely new pink variety.

92745. ESCALLONIA sp.

Donard brilliance. A very floriferous form with bright pink flowers.

92746. ESCALLONIA sp.

Donard gem. A form with attractive pink flowers.

92747. ESCALLONIA sp.

William Watson. A very fine variety with scarlet flowers.

92748 to 92755. LAVANDULA SPICA L. Menthaceae. **Lavender.**

92748. *Miss Duddington.* A charming variety with good blue flowers.

92749. *Munstead blue.* An early flowering plant of bushy habit which produces many spikes of bright blue flowers.

92750. *Twickel purple.* A plant with fine bold foliage and good heads of deep-purple flowers.

92751. Variety *alba.* A form with pure-white flowers.

92752. Variety *nana.* An excellent dwarf form.

92735 to 92762—Continued.

92753. Variety *nana*. *Glasnevin* variety. This is quite distinct from the foregoing [No. 92752].

92754. A handsome evergreen suitable for shrubberies.

92755. The true Lavender Water species.

92756. PRUNUS SARGENTII Rehd. Amygdalaceae. **Sargent cherry.**

One of the loveliest of the Japanese cherries. The large deep-toned, single pink flowers appear in April. The young foliage is reddish and turns to a deep ruby red in the autumn.

92757. SORBUS AUCUPARIA L. Malaceae. **European mountain-ash.**

Variety *Wilsonii*. The large fruited mountain-ash. The pink berries become almost white, and the large leaves color well in the autumn.

92758. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

Variety *Marshal Oyama*. An ornamental apple with medium-sized, rich crimson fruit.

92759. SARCOCOCCA HOOKERIANA DIGYNA Franch. Buxaceae.

An evergreen shrub with black fruits, native to western Szechwan. It grows well in the shade.

92760. SARCOCOCCA SALIGNA (D. Don.) Muell. Arg. (*S. pruniformis* Lindl.). Buxaceae.

An evergreen shrub, 2 to 3 feet high, with smooth erect stems. The smooth, glossy, narrow-lanceolate leaves, 3 to 5 inches long and over 1 inch wide, have a long drawn-out point and a marginal vein on each side extending all around the leaves. The greenish-white flowers are in short axillary racemes, opening in winter and spring. The small purple fruits, less than 1 inch long, are egg-shaped.

For previous introduction see 42628.

92761. TEUCRIUM MASSILIENSE L. Menthaceae.

A herbaceous perennial with small yellowish-green leaves, notched and deeply veined. The minute pink flowers are produced in the leaf and bract axils and form a terminal spike to the growth.

92762. VINCA DIFFORMIS Pourr. Apocynaceae.

A trailing semishrub which dies down in the winter. The pale lilac-blue flowers are produced in November and December.

92763 to 92769.

From Africa. Plants and scions presented by H. Brayard, directeur, Ferme Expérimentale, Marrakech, Morocco. Received April 11, 1931.

92763. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

Plants of the wild peach of this region.

92764. PYRUS MAMORENSIS Trabut. Malaceae. **Pear.**

Plants of a native Morocco pear which grows well in the dry, sandy, noncalcareous soils. The fruits are rather large and the seeds very large. It may be a good stock.

92763 to 92769—Continued.

For previous introduction see 66167.

92765 to 92769. VITIS VINIFERA L. Vitaceae. **European grape.**

92765. *Abbo*. Scions of a very vigorous vine bearing large round black grapes which ripen in September and remain in good condition on the vines until mid-November.

92766. *Asserin*. Scions of a vine with large black round berries which ripen rather early.

92767. *Bezzoult el Aouda* or *Sebra el Benet*. Scions of a white table grape of medium size, ellipsoidal; the skin is thick and pulp firm but juicy; cluster conical and compact.

92768. *Hadari*. Scions of a large dull juicy pinkish grape which usually has just one seed and a not very thick skin. The cluster is medium to large winged; loose, short peduncle. The leaf is glabrous above and cobwebby below, the petiolar sinus is narrow, lateral sinuses overlapping. The vine is very fruitful.

92769. *Le Gouz*. Scions of a very early white grape. The berries are large, elongate, and rather firm.

92770 to 92776.

From France. Seeds presented by Vilmorin-Andrieux & Co., Verrières-le-Buisson, Seine-et-Oise. Received April 13, 1931.

92770. BERBERIS MORRISONICOLA Hort. Berberidaceae. **Barberry.**

A name for which a place of publication and a description have not been found.

92771 to 92774. CLEMATIS spp. Ranunculaceae.

92771. CLEMATIS TEXENSIS × SIMSII (*C. coccinea* × *pitcheri*).

A climbing shrub, more vigorous than either of its parents, with slender reddish stems. The leaves are pinnate with four pairs of orbicular-deltoid, glaucous-green leaflets. The numerous axillary purplish-violet flowers, woolly white within, emit an odor of vanilla. This hybrid originated with F. Morel, a horticulturist of Lyon, France.

92772. CLEMATIS FARGESII Franch.

A woody climber up to 20 feet high, with bipinnate leaves made up of five to seven 3-foliolate or incisely serrate ovate leaflets. The pure white flowers, 1 to 2 inches across, are solitary or in 3-flowered clusters and are borne on a peduncle 4 to 8 inches long. Native to western China.

For previous introduction see 82360.

92773. CLEMATIS GLAUCA ANGUSTIFOLIA Ledeb.

A slender woody climber with the leaflets three parted into narrowly linear-lanceolate segments. The nodding, bell-shaped yellow flowers, 1 to 2 inches across, are borne in few-flowered axillary cymes. It is native to Mongolia.

92770 to 92776—Continued.

92774. CLEMATIS KOREANA Komar.

A prostrate vine, native to Chosen, with trifoliolate leaves having coarsely dentate, sharp-pointed leaflets 2 to 4 inches long, usually three lobed or three parted. The yellow to dull-violet, bell-shaped, nodding flowers, 1 to 2 inches long, are solitary and axillary.

92775. ILEX ALTACLARENSIS Dallim. (*I. aquifolium wilsonii* Hort.). Aquifoliaceae. **Holly.**

Considered to be a hybrid between *Ilex aquifolium* and *I. perado*, with elliptic leaves 2 to 4 inches long, which are thinner than those of *I. aquifolium* and have more numerous and more regular teeth.

92776. ILEX PERNYI Franch. Aquifoliaceae. **Holly.**

A dense-growing evergreen holly of very dwarf compact habit, with small dark-green spiny leaves, squarish at the base, and red berries. It is probably allied to *Ilex cornuta*, and was first discovered by Père Paul Perny in western China.

For previous introduction see 80403.

92777. COCCOTHRINAX ARGENTEA (Roem. and Schult.) Sarg. Phoenicaceae. **Silver palm.**

From Florida. Seeds presented by Charles T. Simpson, Little River. Received July 22, 1930. Numbered in April, 1931.

Seeds from a tree grown by Charles T. Simpson at Little River, Fla. A fine, tall-growing palm native to tropical America, with large, fan-shaped leaves, dark green above and brilliant silvery below. This is a different species from *Coccothrinax garberi*, the small native palm of southern Florida, which is sometimes called the silver palm.

92778. JATROPHA sp. Euphorbiaceae.

From Mexico. Seeds collected by J. H. Hirt, El Paso, Tex., and presented by R. E. Beckett, of Bard, Calif., through the Division of Cotton, Rubber, and Other Tropical Plants, Bureau of Plant Industry. Received April 13, 1931.

Of possible value as a source of rubber.

92779 to 92797.

From England. Seeds presented by Dr. A. W. Hill, director, Royal Botanic Garden, Kew. Received April 13, 1931.

Nos. 92779 to 92787 were introduced for the use of geneticists and are not for distribution.

92779 to 92784. CREPIS spp. Cichoriaceae.

92779. CREPIS ALPINA L.

No. 560.

For previous introduction see 66799.

92780. CREPIS BIENNIS L.

No. 561.

For previous introduction see 66953.

92781. CREPIS DIOSCORIDIS L.

No. 562.

For previous introduction see 66803.

92779 to 92797—Continued.

92782. CREPIS FOETIDA L.

No. 563.

For previous introduction see 66804.

92783. CREPIS SETOSA Hall. f.

No. 564.

For previous introduction see 66618.

92784. CREPIS SIBIRICA L.

No. 565.

For previous introduction see 67007.

92785 to 92787. DATURA spp. Solanaceae.

92785. DATURA INERMIS Jacq.

No. 595.

For previous introduction see 66807.

92786. DATURA STRAMONIUM L.

No. 597.

92787. DATURA TATULA L.

No. 598.

92788 to 92793. HELIANTHUS spp. Asteraceae. **Sunflower.**

92788. HELIANTHUS ANNUUS L. **Common sunflower.**

No. 868.

92789. HELIANTHUS COLORADENSIS Cockerell.

No. 869. A stiff, erect, herbaceous perennial up to 6 feet high, native to Colorado. The rough narrowly lanceolate leaves have remotely dentate margins, and the bright-orange flowers are in loose cymes at the top of the stems.

92790. HELIANTHUS GIGANTEUS L. **Giant sunflower.**

No. 871. A tall, stout, herbaceous perennial up to 12 feet high, native to the eastern part of the United States. The very rough, usually serrate, lanceolate leaves are 3 to 7 inches long, and the pale-yellow flowers are 3 inches across.

92791. HELIANTHUS MOLLIS Lam. **Ashy sunflower.**

No. 872. A stout, simple-stemmed, densely hirsute herbaceous perennial 2 to 4 feet high, native to the central part of the United States. The ovate-lanceolate serrulate leaves, 2 to 5 inches long, are densely pubescent beneath; and the usually solitary, yellow flowers are 2 to 3 inches across.

92792. HELIANTHUS OCCIDENTALIS Riddell.

No. 874. A slender, usually simple-stemmed, herbaceous, perennial 1 to 3 feet high, native to the eastern part of the United States. The oblong-lanceolate, serrulate leaves are mostly basal or below the middle of the stem; and the yellow flowers are 2 to 3 inches across.

92793. HELIANTHUS TOMENTOSUS Michx.

No. 875. A stout herbaceous perennial 4 to 10 feet high, native along the eastern coast of the United States. The thin ovate leaves, often 1 foot long, are densely woolly beneath, and the yellow flowers, 3 to 4 inches across, are borne in a large branching panicle.

92779 to 92797—Continued.

92794 to 92796. RUBUS spp. Rosaceae.

92794. RUBUS INOPERTUS Focke.

A climbing shrub with stout stems and ovate green leaflets. The short-pedicelled flowers are either axillary or clustered at the tips of the branches. Native to southern and central China at an altitude of about 6,000 feet.

For previous introduction see 66606.

92795. RUBUS OCCIDENTALIS L. **Common blackcap.**

A raspberry with very glaucous stems often 10 feet long, rooting at the tips. The compound leaves are made up of three to five ovate, doubly serrate leaflets, light green above and white tomentose beneath. The white flowers, less than an inch across, are borne in few-flowered corymbs and are followed by hemispheric, purple-black, bloomy, edible fruits. It is native to the eastern part of the United States.

For previous introduction see 11514.

92796. RUBUS XANTHOCARPUS Bur. and Franch.

A perennial Chinese climber, 1 to 4 feet long, sparsely prickly or unarmed, which dies to the ground every year. The edible fruit is composed of many golden drupes. Native to central and northwestern China.

For previous introduction see 53540.

92797. SOLANUM JASMINOIDES Paxt. Solanaceae. **Jasmine nightshade.**

A twining shrub up to 20 feet high, native to Brazil. The lower leaves have three narrow, ovate, entire leaflets and the upper ones are lanceolate and entire. The star-shaped white flowers, 1 inch across, are tinged with blue and are borne in short dense racemes.

92798 and 92799. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From Morocco, Africa. Seeds presented by Dr. E. Melge, chief, Service de l'Expérimentation Agricole, Rabat. Received April 15, 1931.

Introduced for the use of specialists working on eggplant wilt.

92798. *Europienne.* **92799.** *Marocaine.*

92800 to 92882.

From Peiping, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 15, 1931.

92800 to 92804. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Wax gourd.**

A collection of commercial varieties, purchased in a seed store in Peiping for the use of department specialists.

92800. No. 6793.

92801. No. 6796. A winter gourd seen commonly in Peiping.

92802. No. 6895. *Shih ping tung kwa,* persimmon-cake, winter squash.

92803. No. 6904. *Yang tung kwa,* foreign winter gourd.

92804. No. 6907. *Tung kwa,* winter gourd.

92800 to 92882—Continued.

92805. CELTIS KORAIENSIS Nakai. Ulmaceae. **Hackberry.**

No. 7735. Presented by Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen, southern Manchuria, China. A tree up to 40 feet high, native to Chosen, with coarsely serrate, broadly ovate leaves 4 to 6 inches long and dull-orange, ovoid fruits a quarter of an inch long.

92806. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

No. 6814. From the Botanical Garden, Peiping, February 24, 1931. A late cucumber.

92807 to 92837. CUCURBITA spp. Cucurbitaceae.

A collection of commercial varieties collected for the use of department specialists.

92807 and 92808. CUCURBITA MAXIMA Duchesne. **Squash.**

92807. No. 6820. *Honan Province bamboo shoot* squash; from the Botanical Garden, Peiping, February 24, 1931.

92808. No. 6827. *Wu Kuan south* squash (Japanese variety); from the Botanical Garden, Peiping.

92809. CUCURBITA PEPO L. **Pumpkin.**

No. 6908. From the East Market, Peiping, March 2, 1931. *Yang hsi hulu,* meaning foreign western gourd.

92810 to 92825. CUCURBITA MOSCHATA Duchesne. **Cushaw.**

92810. No. 6794. From a seed store outside of Peiping. A variety grown in the vicinity of Peiping.

Nos. 92811 to 92820 are from the Botanical Garden, Peiping, February 24, 1931.

92811. No. 6818. Flat or persimmon-cake south squash. This is reported to have originally come from Chengtu, Szechwan.

92812. No. 6819. *Early 1000 per cent sugar south* squash.

92813. No. 6821. *Golden* squash of Shansi Province.

92814. No. 6822. *Early Wu Kuan sugar* squash, a Japanese variety.

92815. No. 6824. *South* squash of Kaopinghsien, Shansi Province.

92816. No. 6825. *West capital south* squash.

92817. No. 6826. *Peiping south* squash.

92818. No. 6828. *So mien south* squash.

92819. No. 6830. *Chrysanthemum south* squash.

92820. No. 6832. *South* squash of Longlinghsien, Hunan Province.

92821. No. 6870. *Fang gwa.* Presented by the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers.

92822. No. 6877. *Long-stem* pumpkin from the village of Hsiangtang, 25 miles north of Peiping.

92800 to 92882—Continued.

92823. No. 6878. *Shih ping wo kwa,* persimmon-cake or flat pumpkin, from the village of Hsiangtang.

92824. No. 6888. *Pa leng wo kwa,* 8-cornered pumpkin, from the East Market, Peiping.

92825. No. 6902. *Chang pa wo kwa,* long stem pumpkin. From the East Market, Peiping, March 2, 1931.

92826 to 92837. CUCURBITA PEPO L. **Pumpkin.**

92826. No. 6795. From a seed merchant outside of the city. A variety commonly grown in the vicinity of Peiping.

Nos. 92827 to 92830 were collected at the Botanical Garden, Peiping, February 24, 1931.

92827. No. 6817. *Peiping west* gourd.

92828. No. 6823. *Bamboo short* squash. Originally from Kaifeng, Honan Province.

92829. No. 6829. *Large flower horn* squash.

92830. No. 6831. *Bitter Mongolia* squash.

92831. No. 6879. *Chiao kwa,* foot squash, from the village of Hsiangtang, 25 miles north of Peiping.

92832. No. 6880. *Hung chiao kwa,* red-foot squash, from the village of Hsiangtang.

Nos. 92833 to 92837 were obtained in the East Market, Peiping, March 2, 1931.

92833. No. 6889. *Chiao kwa,* foot squash.

92834. No. 6891. *Toar nan kwa,* peach shape south squash.

92835. No. 6892. *Nan kwa,* south squash.

92836. No. 6893. *Shih tzu nan kwa,* persimmon south squash.

92837. No. 6903. *Hsi hulu,* western gourd.

92838. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

No. 7744. Seeds found in persimmons from the Toli region. These fruits are said to have thicker skins than persimmons from other regions, and, as a rule, are seedless.

92839. DOLICHOS LABLAB L. Fabaceae. **Hyacinth bean.**

No. 6875. *Pien ton,* a flat bean with pods, said to be edible. From the village of Hsiangtang, 25 miles north of Peiping.

92840. GOSSYPIUM NANKING Meyen. Malvaceae. **Cotton.**

No. 6801. From Chingtien, 10 miles south of Peiping, February 24, 1931. This is said to be a Chinese long-staple cotton.

Nos. 92841 to 92868 are a collection of commercial varieties obtained for the use of department specialists.

92841 to 92847. LAGENARIA LEUCANTHA (Duchesne) Rusby. (*L. vulgaris* Seringe). Cucurbitaceae. **Calabash gourd.**

92800 to 92882—Continued.

92841. No. 6881. *Ching hulu,* green gourd; from the village of Hsiangtang.

Nos. 92842 to 92847 were obtained in the East Market, Peiping, March 2, 1931.

92842. No. 6896. *Yu hulu,* oil dipper gourd.

92843. No. 6897. *Huo kuo hulu,* cricket gourd.

92844. No. 6898. *Hsiao tung yang hulu,* small Japanese gourd.

92845. No. 6899. *Ta ya ya hulu,* large ornamental gourd.

92846. No. 6900. *P'iao hulu,* water dipper gourd.

92847. No. 6901. *Hsiao ya ya hulu,* small ornamental gourd.

92848. LUFFA ACUTANGULA (L.) Roxb. Cucurbitaceae. **Singkwa towelgourd.**

No. 6815. *Canton 8-corner* gourd. From the Peiping Botanical Garden, February 24, 1931.

LUFFA CYLINDRICA (L.) Roemer (*L. aegyptiaca* Mill.). Cucurbitaceae. **Suakwa towelgourd.**

92849. No. 6816. *Peiping thread* gourd. From the Botanical Garden, February 24, 1931.

92850. No. 6882. *Ssu kwa,* thread gourd. From the village of Hsiangtang.

92851. No. 6905. *Hsien ssu kwa,* a thread gourd from the East Market, Peiping, March 2, 1931.

92852. No. 6906. *Pen ssu kwa,* a thread gourd from the East Market, Peiping, March 2, 1931.

92853 to 92866. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

Nos. 92853 to 92862 were obtained in the Botanical Garden, Peiping, February 24, 1931. The Chinese call tomatoes foreign eggplants.

92853. No. 6804. *Huang se chieh,* yellow foreign eggplant.

92854. No. 6805. *Peiping chieh,* Peiping foreign eggplant.

92855. No. 6806. *Early ssubakus aliana.*

92856. No. 6807. *Ten hung tan chieh.*

92857. No. 6808. An early small red tomato.

92858. No. 6809. *Hung se tau chieh,* a red tomato.

92859. No. 6810. *Yen se tan chieh,* beautiful color, foreign eggplant.

92860. No. 6811. An early tomato.

92861. No. 6812. *Early kus ali.*

92862. No. 6813. *Kuantung fan chieh,* Manchurian tomato.

92863. No. 6869. *Hong yuen.* A Chinese variety presented by the Man. shu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen, Manchuria.

Nos. 92864 to 92866 were obtained in the East Market, Peiping, March 2, 1931.

92800 to 92882—Continued.

92864. No. 6883. *Kwang hsi hung shih,* a yellow tomato.

92865. No. 6884. *Ta hsi hung shih,* a large tomato.

92866. No. 6885. *Hsiao hsi hung shih,* small tots tomato.

92867 and 92868. MOMORDICA CHARANTIA L. Cucurbitaceae. **Balsam-pear.**

From the East Market, Peiping, March 2, 1931.

92867. No. 6890. *Lai kwa,* horn squash.

92868. No. 6894. *K'u kwa,* bitter squash.

92869 and 92870. PANICUM MILIACEUM L. Poaceae. **Proso.**

From the village of Chingtien, 10 miles south of Peiping, February 24, 1931.

92869. No. 6802. *Shutzu.* A variety of millet with white seeds.

92870. No. 6803. A variety with yellow seeds.

92871 and 92872. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

92871. No. 6800. From the village of Chingtien, 10 miles south of Peiping. A white garden bean.

92872. No. 6878. *Pai yun ton,* white garden bean. From the village of Hsiangtang, 25 miles north of Peiping.

92873. RHODODENDRON METTERNICHII Sieb. and Zucc. Ericaceae. **Leatherleaf rhododendron.**

No. 7736. From the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen, Manchuria, February 11, 1931. A shrub 12 to 15 feet high, native to Japan. The oblanceolate leaves, 2 to 5 inches long, are dark green above and gray tomentose beneath; and the pale to deep rose-pink campanulate flowers, 2 to 3 inches across, are borne in loose clusters.

92874 and 92875. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Presented by Yen Yi Chai, at the village of Chingtien, 10 miles south of Peiping.

92874. No. 6797. *Cat eye.*

92875. No. 6798. A green soybean.

92876 to 92880. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

92876. No. 6868. From a Chinese seedsman, southwest of Peiping, February 19, 1931.

Nos. 92877 and 92878 were grown in the vicinity of Dairen, Manchuria, and presented by the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, February 27, 1931.

92877. No. 6871. *Yuen leu.*

92878. No. 6872. *San Juae.*

Nos. 92879 and 92880 were obtained in the East Market, Peiping, March 2, 1931.

92879. No. 6886. *Chin po tsai,* autumn spinach.

92800 to 92882—Continued.

92880. No. 6887. *Huo yueh tsai,* fire leaf spinach. A summer variety.

92881. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae.

No. 6874. *Tsai tou,* vegetable bean (long pod). A small oblong, rather flat, black bean with a prominent white hilum. From the village of Hsiangtang, presented by Chu Li Chi.

92882. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

No. 6799. From the village of Chingtien, 10 miles south of Peiping, February 24, 1931. A brown-eyed cowpea.

92883 to 92932.

From Mexico, Central America, and the West Indies. Material collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received April 14, 1931.

92883. FOUQUIERIA sp. Fouquieriaceae.

No. 9177. Cuttings collected south of La Paz, Lower California, March 30, 1931.

The fouquierias are small trees or shrubs which become leafless in dry weather. The fleshy obovate leaves are produced from the axils of the thorns, and the showy tubular flowers are in terminal racemes.

92884 and 92885. GOSSYPIUM HARKNESSII T. S. Brandeg. Malvaceae. **Cotton.**

No. 9189. Collected on Carmen Island, April 3 and 4, 1931. A shrubby perennial plant forming rounded clumps 2 to 3 feet high, with angled branches, broadly cordate leaves, and sulphur-yellow flowers 2 to 3 inches across. It is native to Lower California.

92884. Plants. **92885.** Cuttings.

92886. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. **Avocado.**

No. 9152. Seeds collected above Tecpan, Guatemala, at 10,000 feet altitude, March 11, 1931. A wild avocado which is frost resistant.

92887. TRIPSACUM sp. Poaceae. **Grass.**

No. 9197. Plants collected at San Salvador, March 5, 1931. A grass with hairy sheaths.

92888. TRIPSACUM sp. Poaceae. **Grass.**

No. 9198. Plants collected at Santa Cruz de Naranja, Guatemala, March 9, 1931. A grass with smooth sheaths which is cultivated in the region of Los Tezsinte.

92889. IBERVILLEA SONORAE (S. Wats.) Greene (*Maximowiczia sonorae* S. Wats.). Cucurbitaceae.

No. 9193. Root collected on the Esperitu Santo Islands, April 1, 1931. An ornamental, watermelonlike vine with a large root which projects above the ground. The leaves are 4 inches broad, twice three cleft, with the lobes coarsely sinuate toothed. The ovate fruits, 1 to 2 inches long, have a thick fleshy rind which while green is covered with about 10 longitudinal rows of white dots; when ripe the fruit becomes amber colored.

92883 to 92932—Continued.

92890. AGAVE sp. Amaryllidaceae.

No. 9182. Collected on Gallito Island, Lower California, April 1, 1931. A species with yellow flowers.

92891. ATTALEA COHUNE Mart. Phoenicaceae. **Cohune.**

No. 9164. Collected at Manzanillo, Mexico, March 25, 1931. A magnificent, feather-leaved palm, native to the West Indies and Central America, which reaches a height of 40 feet, with leaves about 20 feet long, produced abundantly at the top of the trunk. The yellowish flowers are borne very freely, and the ovoid fruit, 2 to 3 inches long, contains the seed or nut which yields an oil of considerable value, as it is of high quality and finds a ready sale for cooking purposes.

For previous introduction see 69063.

92892. ELAPHRIUM sp. (*Bursera* sp.) Balsameaceae.

No. 9173. Collected south of La Paz, Lower California, March 30, 1931. A tree with red bark; one of several species which furnish the copal gum that is used as incense by the Indians of Central America.

92893. CALOCARPUM VIRIDE Pittier. Sapotaceae. **Green sapote.**

No. 9161. *Injerto.* Obtained in the market at Guatemala City, March 13, 1931. A tree, native to Guatemala, which grows at altitudes between 5,000 and 6,000 feet. It is about 40 feet high, with long, slender leaves and commonly round to oval fruits often pointed at the tip. The fruits are from 2 to nearly 4 inches in diameter, smooth, dull yellow green, sometimes becoming almost dull yellow. The skin is not thick and adheres closely to the red-brown flesh, which is often soft and melting with a sweet flavor. The one or two large deep-brown seeds are hard and polished and easily removed from the pulp.

For previous introduction see 80683.

92894. CARICA PAPAYA L. Papayaceae. **Papaya.**

No. 9154. Obtained in the market at Panama, February 26, 1931. A papaya with pink flesh.

92895. CARICA PAPAYA L. Papayaceae. **Papaya.**

No. 9155. *Solo* variety. Obtained from J. E. Higgins, director, Experiment Gardens, Summit, Canal Zone, February 26, 1931.

92896. ENTADA POLYSTACHYA (L.) DC. Mimosaceae.

No. 9168. Collected at Acapulco, Mexico, March 21, 1931. A woody vine, native to Mexico, with bipinnate leaves made up of oblong leaflets 1 to 2 inches long and dense spikes of small greenish flowers followed by flat pods 1 foot long and 2 to 3 inches wide.

92897. CEIBA sp. Bombacaceae.

No. 9166. Collected near Acapulco, Mexico, in a dry arroyo. A tree 10 feet high.

92898. EUPHORBIA sp. Euphorbiaceae. **Spurge.**

92883 to 92932—Continued.

No. 9179. Collected at La Paz, Lower California, March 31, 1931. Poinsettia, a tree with a latex very much like rubber.

92899. FOUQUIERIA sp. Fouquieriaceae.

No. 9184. Collected at La Paz, Lower California, March 31, 1931. The fouquierias are small trees or shrubs which become leafless in dry weather. The fleshy obovate leaves are produced from the axils of the thorns, and the showy tubular flowers are in terminal racemes.

92900 to 92916. GOSSYPIUM spp. Malvaceae. **Cotton.**

92900 and 92901. GOSSYPIUM DAVIDSONII Kellogg.

92900. No. 9171. Collected at La Paz, Lower California, March 30, 1931, in the desert south of the city, where it was growing among cacti. A shrub up to 5 feet high, with broadly cordate, entire or rarely toothed leaves, densely velvety on both sides. The bright lemon-yellow flowers are 1 to 2 inches across and have a purple spot at the base of each petal. It is native to Lower California.

92901. No. 9183. Collected March 31, 1931.

92902 and 92903. GOSSYPIUM HARKNESSII T. S. Brandeg.

For previous introduction see 92885.

92902. No. 9189. Collected on Carmen Island, April 3 and 4, 1931.

92903. No. 9196. Collected on San Marcos Island, Mexico, April 6, 1931.

92904. GOSSYPIUM HIRSUTUM L. **Upland cotton.**

No. 9167. Presented by the American consul, Acapulco, Mexico, March 21, 1931. Locally grown seed.

92905. GOSSYPIUM sp.

No. 9180. Collected at La Paz, Lower California, March 31, 1931.

92906. GOSSYPIUM sp.

No. 9181. Collected at La Paz, Lower California, March 31, 1931.

92907. GOSSYPIUM sp.

No. 9195. Collected at Santa Rosalia, Lower California, April 6, 1931.

92908. GOSSYPIUM sp.

No. 9146. Collected at Pedro Miguel, Canal Zone, February 22, 1931.

92909. GOSSYPIUM sp.

No. 9147. Collected at Pedro Miguel, Canal Zone, February 22, 1931.

92910. GOSSYPIUM sp.

No. 9148. Collected at Panama, February 27, 1931.

92911. GOSSYPIUM sp.

No. 9149. Collected at Panama, February 26, 1931. A wild cotton.

92912. GOSSYPIUM sp.

No. 9151. Collected en route from La Union to San Salvador, El Salvador, March 6, 1931. A cultivated cotton.

92883 to 92932—Continued.

92913. GOSSYPIUM sp.

No. 9160. Collected at Acapulco, Mexico, March 21, 1931.

92914. GOSSYPIUM sp.

No. 9169. Kidney cotton, collected at Mazatlan, Sinaloa, Mexico, March 27, 1931.

92915. GOSSYPIUM sp.

No. 9172. Collected in a garden at La Paz, Lower California, March 30, 1931.

92916. GOSSYPIUM sp.

Collected in Panama.

92917. HIBISCUS CRYPTOCARPOS A. Rich. Malvaceae.

No. 9112. From Soledad, Cuba, February 8, 1931. A shrub with long-petioled, cordate, palmately 5-lobed leaves 3 to 4 inches long and wide, and solitary plum-colored flowers. It is native to Cuba.

For previous introduction see 90917.

92918. LYCIUM sp. Solanaceae.

No. 9178. Collected at La Paz, Lower California, March 31, 1931.

92919. LYCIUM sp. Solanaceae.

No. 9188. Collected at Agua Verde, April 3, 1931. An ornamental vine with good flowers.

92920. MAMMILLARIA sp. Cactaceae. **Cactus.**

No. 9185. Collected on the Isla Partidas, Lower California, April 1, 1931.

92921. MARTYNIA sp. Martyniaceae.

No. 9165. From Acapulco, Mexico, March 21, 1931. Wild plants found in an arroyo near the town.

92922. OPUNTIA sp. Cactaceae. **Pricklypear.**

No. 9186. Collected on the Isla Partidas, Lower California, April 1, 1931.

92923. PASSIFLORA FRUTICOSA Killip. Passifloraceae.

No. 9187. Collected on San Francisco Island, Gulf of California, April 2, 1931. A low shrub 8 to 16 inches high, with a few short sprawling branches. The circular leaves are three lobed, densely soft hairy, and about 1 inch wide. The globose fruit, 1 inch in diameter, is densely pubescent with long silky hairs. Native to Lower California.

92924. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.) Lauraceae. **Avocado.**

No. 9153. Collected above Tecpan, Guatemala, at 10,000 feet altitude, March 11, 1931. Seeds from a frost-resistant tree.

92925. PHYLLANTHUS EMBLICA L. Euphorbiaceae. **Nelli.**

No. 9119. Collected at Soledad, Cuba, February 9, 1931. A small tree with slender branches bearing numerous linear, 2-ranked leaves about half an inch long. The globose fruits are used as a purgative when raw, or cooked to make an acid sauce. Native to tropical Asia.

For previous introduction see 88130.

92883 to 92932—Continued.

92926. SICANA ODORIFERA (Vell.) Naud. Cucurbitaceae. **Casabanana.**

No. 9194. From the market at Guatemala City, March 14, 1931. A subtropical ornamental cucurbitaceous vine producing large fruits like a watermelon a foot or more long, which are edible but insipid.

For previous introduction see 80701.

92927. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

No. 9157. Collected on Grand Cayman Island, February 11, 1931.

92928. SPHAERALCEA CALIFORNICA Rose. Malvaceae.

No. 9176. Collected near La Paz, Lower California, March 30, 1931. A tall coarse herbaceous perennial 4 to 10 feet high, native to Lower California. The densely stellate, 3-lobed, triangular-oblong leaves are crenately toothed and are 2 to 3 inches long; and the small orange-colored flowers are borne in an open panicle.

92929 to 92932. ZEA MAYS L. Poaceae. **Corn.**

92929. No. 9150. Collected en route from La Union to San Salvador March 6, 1931. White corn.

92930. No. 9156. From the Panama market, February 23, 1931. Yellow corn.

92931. No. 9158. Collected at Chacalapa, Oaxaca, Mexico, March 19, 1931. Yellow and white corn.

92932. No. 9190. Collected at La Paz, Lower California, April 30, 1931. Shelled corn.

92933. VITIS VINIFERA L. Vitaceae. **European grape.**

From Corsica. Cuttings presented by F. Durazzo, Sartene, through Niels Nielsen, agricultural commissioner, American consulate, Marseille, France. Received April 16, 1931.

Variety unknown.

92934 to 92938. AVENA spp. Poaceae. **Oats.**

From Germany. Seeds presented by Dr. von Helmut Frenzel, through Dr. Arnold Scheibe, Berlin-Dahlem, Biologische Reichsanstalt. Received April 21, 1931.

Introduced for the use of specialists working with the crown rust of oats.

92934 to 92936. AVENA SATIVA L.

92934. No. 4. *Brie.*

92935. No. 7. *Odenwalder straus.*

92936. No. 2. *Uruguay.*

92937. AVENA STERILIS L.

No. 8. C. 7. 840-49.

92938. AVENA sp.

No. 9. *Mortgage Lifter.*

92939 to 92941.

From Brazil. Seeds presented by Amadeu Barbiellini, São Paulo. Received April 16, 1931.

92939 to 92941—Continued.

92939. MIMOSA BRACAATINGA Hoehne. Mimosaceae.

A tree or large shrub, up to 50 feet high, with an erect trunk. The bipinnate leaves, up to 4 inches long, are composed of 3 to 14 pairs of pinnae and about 30 pairs of pinnules for each pinnae. The small yellowish flowers are in terminal heads less than an inch in diameter. It is native to Brazil.

92940. PENNISETUM SETOSUM (Swartz) L. Rich. Poaceae. **Grass.**

A robust perennial grass 2 to 4 feet high, distributed through the Tropics of both hemispheres and often used for forage.

For previous introduction see 74467.

92941. TERAMNUS UNCINATUS (L.) Swartz. Fabaceae.

A slender tropical American leguminous vine, used as forage in Brazil and also in the Virgin Islands.

For previous introduction see 88188.

92942 to 92947. ALSTROEMERIA spp. Amaryllidaceae.

From the Netherlands. Roots purchased from C. G. Van Tubergen (Ltd.), Haarlem. Received April 17, 1931.

92942. ALSTROEMERIA BRASILIENSIS Spreng. **Brazilian alstroemeria.**

A fleshy rooted plant, native to Brazil, with a stem 3 to 4 feet high, remote thickish, oblong-lanceolate leaves 2 inches long, and umbels of brown-spotted, reddish-yellow flowers 1 inch long.

92943. BOMAREA SALSILLA (L.) Mirb. (*Alstroemeria oculata* Lodd.).

A twining vine, native to Chile, with parallel-veined, oblong-lanceolate leaves 2 to 4 inches long on twisted petioles, and small reddish flowers marked with blue and purple inside, in compound umbels.

92944. ALSTROEMERIA PELEGRINA L.

A Chilean alstroemeria with thin, lanceolate leaves 2 inches long and a flower stem 1 foot high bearing an umbel of purple-spotted, lilac flowers 1 inch long.

92945. ALSTROEMERIA PELEGRINA L.

Variety *alba*. A form with pure white flowers.

92946. ALSTROEMERIA LIGTU PULCHRA (Sims) Baker (*A. tricolor* Hook.).

A bulbous plant, native to Chile, with thin, linear-lanceolate leaves 2 to 3 inches long and a flower stem 2 feet high bearing a compound umbel of whitish lilac or pale red flowers 1 to 2 inches long, streaked with purple.

92947. ALSTROEMERIA VIOLACEA Philippi.

A Chilean species with a stem 1 to 2 feet high, scattered, spreading, ovate-oblong leaves 1 inch long, and compound umbels of bright lilac flowers 1 to 2 inches long.

92948 to 92955. FICUS spp. Moraceae. **Fig.**

From Egypt. Cuttings presented by the director, horticultural section, Ministry of Agriculture, Giza. Received April 17, 1931.

92948 to 92955—Continued.

92948. FICUS BENJAMINA L. **Benjamin fig.**

A large tree, up to 80 feet high, native to India, with thin coriaceous ovate leaves 3 inches long and axillary pairs of small globose, blood-red fruits.

For previous introduction see 80080.

92949. FICUS ELASTICA L. **India rubbertree.**

In the Tropics this tree becomes 100 feet high with long shining leathery, oblong to elliptic, dark-green leaves which end with an abrupt dull point. It is commonly used as a house plant, but usually becomes unsightly under glass when it is 8 or 10 feet high.

92950. FICUS PLATYPODA (Miquel) A. Cunn.

A small tree with thick leathery ovate leaves 2 to 4 inches long and axillary pairs of small globular fruits. It is native to Australia.

92951. FICUS GIBBOSA Blume.

A handsome medium-sized tree with a single gray trunk. The large glossy leaves are dark green, and the berries are deep orange and half an inch in diameter.

For previous introduction see 67564.

92952. FICUS MYSORENSIS Heyne.

A large broadly spreading tree, native to the forests of the subtropical Himalayas from Sikkim eastward. The aerial roots are few embracing the trunk, and the ovate leathery leaves which are prominently veined are up to 8 inches in length.

For previous introduction see 58587.

92953. FICUS RELIGIOSA L. **Sacred bo tree.**

A large tropical tree up to 100 feet high, with the rotund-ovate coriaceous leaves suspended on slender petioles 4 inches long and with the apex produced into a long linear-lanceolate taillike appendage. The dark-purple axillary fruits are about half an inch in diameter. It is native to India.

For previous introduction see 81823.

92954. FICUS TSIELA Roxb.

A large spreading tree without aerial roots, native to southern India and Ceylon. The broadly ovate to ovate-lanceolate coriaceous leaves have a thickened marginal nerve, and the smooth purple fruits, about half an inch in diameter, are crowded in the axils of the leaves at the ends of the branches.

92955. FICUS VASTA Forsk.

A large tree with stout softly tomentose branchlets, native to northern Africa and Arabia. The broadly cordate, thin leaves are 1 foot wide by 10 inches long and are softly pubescent on both surfaces. The subglobose fruits, about half an inch in diameter, are in axillary clusters.

92956. POPULUS sp. Salicaceae.

From Canada. Cuttings presented by Norman M. Ross, chief, tree-planting division, Forest Service, Department of the

92956—Continued.

Interior, Indian Head, Saskatchewan. Received April 17, 1931.

A hybrid poplar found on the banks of the South Saskatchewan River, near Saskatoon. The tree grows readily from cuttings and makes a rapid growth under cultivation.

92957. PARKIA SPECIOSA Hassk. Mimosaceae.

From Straits Settlements. Seeds collected in the Botanic Garden at Penang by P. J. Wester, Bureau of Agriculture, Manila, P. I. Received April 18, 1931.

Petai. A smooth-barked tree up to 80 feet high and 3 feet in diameter, native to the Malay Peninsula. The pubescent, bipinnate leaves are made up of 10 to 15 pairs of pinnae each bearing 20 to 35 pairs of linear-oblong leaflets one-quarter of an inch long. The white flowers are borne in dense ovoid heads on long peduncles and are followed by thin flat pods about 18 inches long which are cooked and eaten as a vegetable by the Malays.

92958 to 92991.

From the Union of Soviet Socialist Republics. Seeds presented by G. Grossmann, chief, Bureau of Introduction, Institute of Plant Industry, Leningrad. Received April 17, 1931.

A collection of plants growing under very dry arid conditions at the Repetek Sand Desert Station, Turkmenistan Republic.

92958. AGRIOPHYLLUM LATIFOLIUM Fisch. and Mey. Chenopodiaceae.

A much-branched annual with ovate or subcordate, long-cuspidate leaves and small inconspicuous flowers in globular axillary clusters. Native to sandy deserts in Turkestan.

92959. AGRIOPHYLLUM MINUS Fisch. and Mey. Chenopodiaceae.

An annual, native to sandy deserts in Turkestan, with sessile linear-subulate leaves and inconspicuous axillary flowers.

92960. AGROPYRON ORIENTALE LANUGINOSUM (Griseb.) Richter. Poaceae. **Grass.**

A perennial grass of possible value as a forage crop.

92961. AGROPYRON SQUARROSUM (Roth) Link. Poaceae. **Grass.**

A perennial grass of possible value for forage.

92962. AMMODENDRON CONOLLYI Bunge. Fabaceae.

An evergreen silky-leaved Siberian shrub used as a sand binder.

For previous introduction see 78474.

92963 and 92964. HALOXYLON AMMODENDRON (Meyer) Bunge. Chenopodiaceae. **Saxaul.**

A shrub or tree up to 20 feet high, native to Turkestan. It has a gnarled trunk, light-green branchlets which are leafless, and small fruits with thin papery suborbicular wings.

92963. Received as *Arthrophytum arborescens.*

92964. Received as *Arthrophytum haloxylon.*

92958 to 92991—Continued.

92965. ARISTIDA PENNATA MINOR Litv. Poaceae. **Grass.**

A perennial grass of possible value as a forage crop.

92966. ARISTIDA PENNATA KARELINI Trin. and Rupr. Poaceae. **Grass.**

A perennial grass of possible value as a forage crop.

92967. ASTRAGALUS CONFIRMANS Freyn and Bornm. Fabaceae.

A shrub 3 to 5 feet high with oblong-lanceolate caducous leaves up to 2 inches long and racemes of dark-violet flowers. Native to the Caspian region.

92968. ATRIPLEX DIMORPHOSTEGIA Kar. and Kir. Chenopodiaceae.

An annual 18 inches high with alternate membranous ovate leaves and terminal or axillary inconspicuous flowers. Native to dry regions in Arabia and Persia.

92969. BROMUS TECTORUM L. Poaceae. **Grass.**

An annual grass to be tested as a ground cover in the arid Southwest.

92970 to 92974. CALLIGONUM spp. Polygonaceae.

92970. CALLIGONUM ARBORESCENS Litv.

A drought-resistant shrub 10 feet high, said to be a good sand binder. It is found in the region of the Caspian Sea.

For previous introduction see 73185.

92971. CALLIGONUM CAPUT-MEDUSAE Schrenk.

A leafless shrub with dichotomous branches, small reddish flowers in the axils of the sheaths, and nutlike fruits covered with filamentous reddish spines. Possibly of value as an ornamental in desert regions and useful as a sand binder. It is native to western Asia.

92972. CALLIGONUM COMOSUM L'Herit.

A densely branched shrub 10 to 15 feet high with minute subulate leaves and small ovate densely spiny nutlike fruits. Native to the eastern Mediterranean region.

92973. CALLIGONUM ERIOPODUM Bunge.

A slender-branched shrub with whitish branchlets and linear-subulate minute leaves which are early deciduous. Native to Turkestan.

92974. CALLIGONUM SETOSUM Litv.

A leafless shrub much like *C. caput-medusae,* but the filaments on the fruits are brownish, longer, and more slender. It is native to the Caspian region.

92975. CAREX PHYSODES Bieb. Cyperaceae. **Sedge.**

A sedge which is native to the desert sands of southern Turkestan. It is excellent as forage and also valuable as a sand-binding plant.

92976. CONVOLVULUS DIVARICATUS Regel and Schmalh. Convolvulaceae.

A densely hairy erect or ascending plant with small ovate acute sessile leaves

92958 to 92991—Continued.

two-fifths of an inch long and very small terminal or axillary flowers. Native to sandy places near Chiva, central Asia.

92977. CORISPERMUM PAPILLOSUM (Kuntze) Iljin. Chenopodiaceae.

A low bushy plant up to 1 foot high, with slender arched branches. The lower leaves are oblanceolate, the upper ones almost linear. Native to Turkestan.

92978. CUTANDIA MEMPHITICA (Spreng.) Richter. Poaceae. **Grass.**

A perennial grass of possible value as a forage crop.

92979. DOREMA SABULOSUM Litv. Apiaceae.

A herbaceous perennial about 6 feet high with a thick stem and radical triangular pinnate leaves up to 18 inches long. Native to the Caspian region.

92980. EPHEDRA ALATA Decaisne. Gnetaceae.

A tall freely branching shrub with rough green equisetumlike branches, small scalelike leaves, and inconspicuous flowers; native to Arabia and northern Africa. Of possible value as a source of ephedrine.

For previous introduction see 77438.

92981. EREMOSPARTON FLACCIDUM Litv. Fabaceae.

A bushy tree about 15 feet high, native to sandy places in the trans-Caspian region. The branches are threadlike and limp, and the small flowers are dark violet.

92982. FERULA KARELINI Bunge. Apiaceae.

A perennial about 18 inches high, native to arid regions in Persia, with decompound leaves and umbels of yellowish flowers.

92983. FERULA LITWINOWIANA K.-Pol. Apiaceae.

A low herbaceous hairy perennial with numerous small triangular pinnately cut leaves and inconspicuous flowers in compound umbels. Native to the trans-Caspian region.

92984. GAGEA CHLORANTHA (Bieb.) Schult. f. Liliaceae.

A bulbous plant with filiform or narrow-lanceolate leaves and corymbs of greenish-yellow flowers. Native to stony dry places in the Caucasus.

92985. ISATIS MINIMA Bunge. Brassicaceae.

A low annual, native to central Asia, with oblong sinuate radical leaves, linear-lanceolate stem leaves, and yellow flowers.

92986. ISATIS VIOLASCENS Bunge. Brassicaceae.

A slender annual about 1 foot high with oblong-lanceolate entire leaves up to 2 inches long, with a lax panicle of yellow flowers. Native to desert places in Persia.

92987. RHEUM TURKESTANICUM Janischew. Polygonaceae.

A wild rhubarb, from the trans-Caspian region, over 2 feet high with a large thick rhizome and a short thickened

92958 to 92991—Continued.

densely leafy stem. The cordate reniform leaves, up to eight in number, are about 1 foot wide.

92988 to 92990. SALSOLA spp. Chenopodiaceae.

92988. SALSOLA INCANESCENS Meyer.

An erect hairy annual about 6 inches high, native to Asia Minor, with alternate fleshy filiform deciduous leaves about an eighth of an inch long and numerous stiff branches.

92989. SALSOLA ARBUSCULA Pall. (*S. reichleri* Hort.).

A shrub up to 15 feet high, native to Turkestan, with linear leaves 3 inches long and inconspicuous flowers. It is used to bind sand along the trans-Caspian Railway.

For previous introduction see 33264.

92990. SALSOLA SUBAPHYLLA Meyer.

A leafless much-branched shrub about 1 foot high, native to desert places on the shores of the Caspian Sea.

92991. SMIRNOWIA TURKESTANA Bunge. Fabaceae.

A much-branched shrub with long almost filiform branches and leaves reduced to a single obovate leaflet. Native to desert places in Turkestan.

92992 to 93000.

From China. Material collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received April 20, 1931.

92992 to 92998. DIOSPYROS spp. Diospyraceae. **Persimmon.**

92992 to 92994. DIOSPYROS KAKI L. f. **Kaki persimmon.**

Scions obtained at Kutang, Hangchow, Chekiang Province, March 20, 1931, from Chang Shih Lun.

92992. No. 6921. *Fire persimmon.*

92993. No. 6923. *Square persimmon.*

92994. No. 6924. *High foot persimmon.*

Nos. 92995 and 92996 are trees obtained at Kutang, Hangchow, Chekiang Province, March 20, 1931, from Chang Shih Lun.

92995. DIOSPYROS sp.

No. 6922. *White-barked persimmon.*

92996. DIOSPYROS sp.

No. 6925. *Yueh shih tzu.* The wild persimmon of Hangchow. This variety is used extensively in the Kutang region as stock to graft the commercial varieties of persimmon. The red fruits are small, not more than 1 inch in diameter. It is reported that trees grafted on this stock produce more fruit than those grafted on the white-barked persimmon, but the quality is not quite so good.

92997. DIOSPYROS sp.

No. 6926. Scions of the trees sent in under No. 6925 [No. 92996].

92998. DIOSPYROS sp.

No. 6929. Scions of the trees sent in under No. 6922 [No. 92995].

92992 to 93000—Continued.

92999 and 93000. TRAPA NATANS L. Trapaceae. **Waterchestnut.**

92999. No. 6927. *Hang Chow hsiao ling chiao,* small water nut of Hangchow. From Kutang, near Hangchow, Chekiang Province, March 20, 1931. Seeds presented by Chang Shih Lun. A locally grown variety. The nuts are said to be green when first taken from the water; later they turn black..

93000. No. 6928. *Ka Hsing nan hu ling chiao,* the south lake water nut of Kahsing, Chekiang Province. This nut is found only in this locality.

93001. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From Africa. Seeds purchased from H. E. V. Pickstone & Bro. (Ltd.), Simondium, Cape of Good Hope Province. Received April 21, 1931.

Variety *Inkoos.* A freestone peach which is said to withstand warm weather during a normal cold winter.

93002. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

From China. Seeds presented by N. Gist Gee, Rockefeller Foundation, Peiping, China. Received April 24, 1931.

Big Peking.

93003 to 93065.

From China. Seeds collected by P. H. Dorsett and W. J. Morse agricultural explorers, Bureau of Plant Industry. Received April 20, 1931.

Nos. 93003 to 93035 are commercial varieties, obtained for the use of department horticulturists.

93003 to 93006. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Waxgourd.**

Nos. 93003 and 93004 are from Hangchow, Chekiang Province, March 20, 1931.

93003. No. 6945. A winter gourd.

93004. No. 6953. A round winter gourd.

93005. No. 6964. *Tung kua,* long citron winter gourd. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93006. No. 7752. Large winter gourd from Shanghai, March 24, 1931.

93007 to 93023. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931. They are classed by the Chinese as varieties of squash.

93007. No. 6967. *Ch'ing p'i hsiao tsai kua.* A small black-skinned melon, classed by the Chinese as a summer squash.

93008. No. 6968. *Pai pi tien kua.* A white-skinned melon.

93009. No. 6969. *Hsiao pai pi tsai kua,* meaning little white-skinned summer vegetable melon.

93003 to 93065—Continued.

93010. No. 6970. *Pa leng su kua,* or 8-cornered crisp melon.

93011. No. 6971. *Hung hsin pai pi tsai kua.* A red-hearted, white-skinned summer vegetable.

93012. No. 6972. *Hsiao pai pi tien kua.* A little white-skinned melon.

93013. No. 6973. *Shih tao ch'ing t'ien kua,* 10-stripe green melon.

93014. No. 6974. *Chih ma li su t'ien kua,* or sesame seed crisp melon.

93015. No. 6975. *Hsiao pai pi su kua.* A small white-skinned crisp vegetable melon.

93016. No. 6976. *Chin pa ch'ih t'ien kua,* or golden section muskmelon.

93017. No. 6977. *Hei pi hua tien kua.* A black-skinned field melon.

93018. No. 6978. *Hei han t'ien ts'ai kua,* or black-man's leg melon. A long slender summer melon.

93019. No. 6979. *Hsiao hung tzu t'ien kua.* A small red-seeded melon.

93020. No. 6980. *Hsiao chih ma li su t'ien kua.* A small sesame seed melon.

93021. No. 6981. *He ma su kua,* or toad-skin crisp melon. It resembles the Hubbard squash.

93022. No. 6982. *Ta pai pi su kua.* A large white-skinned melon.

93023. No. 6983. *Hsieh hua t'ien kua,* or drop flower melon. This melon is sweet as soon as the flowers drop.

93024. CUCURBITA PEPO L. **Pumpkin.**

No. 6961. *Hsi hu lu,* or western gourd. Obtained through Dr. Hugh W. Hubbard, Paotingfu, China.

93025 to 93033. CUCURBITA MOSCHATA Duchesne. **Cushaw.**

Nos. 93025 to 93029 were collected at Hangchow, Chekiang Province, March 20, 1931.

93025. No. 6947. Round south squash.

93026. No. 6948. Long red south squash.

93027. No. 6950. Early round south squash.

93028. No. 6951. Long red south squash.

93029. No. 6956. Round south red squash.

Nos. 93030 to 93032 were obtained through Dr. Hugh W. Hubbard, Paotingfu, China.

93030. No. 6959. *Hsiao pa leng wo kwa,* small 8-cornered pumpkin.

93031. No. 6960. Mixed varieties of pumpkin from the mountains northwest of Paotingfu.

93032. No. 6963. Dog-neck squash.

93033. No. 7754. Long south squash from Shanghai, March 24, 1931.

93034. CUCURBITA MAXIMA Duchesne. **Squash.**

No. 6962. *Nan kua,* or south squash. A very large squash obtained through

93003 to 93065—Continued.

Dr. Hugh W. Hubbard, of Paotingfu, China, March 15, 1931.

93035. CUCURBITA PEPO L. **Pumpkin.**

No. 7753. Flat south squash from Shanghai, March 24, 1931.

93036. HICORIA CATHAYENSIS (Sarg.) Chun. Juglandaceae. **Hickory.**

No. 6930. From Yungyuang, 15 miles from Hangchow. A Chinese tree up to 75 feet high with a gray-barked trunk 1 to 2 feet in diameter and compound leaves about 1 foot long, composed of five to seven pairs of narrowly oval leaflets which are pale green above and rusty brown beneath. The thick-shelled nuts, about 1 inch long, are eaten as a sweetmeat, and a clear yellow oil is extracted from them for use in fancy pastry. The strong tough wood is used for tool handles.

For previous introduction see 75981.

Nos. 93037 to 93046 are commercial varieties collected for the use of department horticulturists.

93037 to 93041. LAGENARIA LEUCANTHA (Duchesne) Rusby (*L. vulgaris* Seringe). Cucurbitaceae. **Calabash gourd.**

Nos. 93037 to 93039 were collected at Hangchow, Chekiang Province, March 20, 1931.

93037. No. 6946. So-called long gourd.

93038. No. 6952. Round gourd.

93039. No. 6955. *Chang hulu,* or long gourd.

93040. No. 6965. *Shan chia hu tzu.* A very long tender vegetable gourd which grows on a trellis. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93041. No. 7751. Mixed sample of gourd seed from Shanghai.

93042 to 93044. LUFFA CYLINDRICA (L.) Roemer (*L. aegyptiaca* Mill.). Cucurbitaceae. **Suakwa towelgourd.**

93042. No. 6954. From Hangchow, Chekiang Province, March 20, 1931. A long thread gourd.

93043. No. 6966. *Szu kua tzu.* A long slender gourd which grows on a trellis and is a good shade vine. Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93044. No. 7000. A thread gourd from Shanghai.

93045 and 93046. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

Obtained at Shanghai March 24, 1931.

93045. No. 6998.

93046. No. 6999. A large tomato.

93047. PHASEOLUS AUREUS Roxb. Fabaceae. **Mung bean.**

No. 6943. From Hangchow, Chekiang Province, March 20, 1931. A variety with small green seeds.

93048. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

No. 6941. From Kutang, near Hangchow, Chekiang Province. A very red radish which is commonly eaten on the street by the natives.

93003 to 93065—Continued.

93049. RAPHANUS SATIVUS L. Brassicaceae. **Radish.**

No. 6942. From Hangchow. A long red radish.

93050 to 93060. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 93050 to 93058 were collected at Hangchow, China.

93050. No. 6931. A wild soybean, collected along the road near the Botanical Garden.

93051. No. 6933. *Liu yueh pai mao ton,* which means sixth-month white hairy bean. A yellow soybean.

93052. No. 6934. *Chi yueh pai mao ton,* which means seventh-month white hairy bean.

93053. No. 6935. *Wu yueh kuo pan pai mao ton,* which means fifth-month broad-pod white bean. A yellow soybean.

93054. No. 6936. *Wu yueh pai mao ton,* which means fifth-month white hairy bean. A green and yellow soybean.

93055. No. 6937. A yellow soybean.

93056. No. 6938. A variety with large black seeds.

93057. No. 6939. *Ke lu ton,* parrot grain bean. A variety with large green seeds.

93058. No. 6940. A variety with large yellow seeds.

Nos. 93059 and 93060 were purchased in Shanghai March 24, 1931.

93059. No. 6995. A variety with large yellow seeds.

93060. No. 6996. A large black soybean with yellow germ.

93061 to 93064. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

Commercial varieties obtained for the use of department horticulturists.

Nos. 93061 and 93062 were obtained at Hangchow, Chekiang Province, March 20, 1931.

93061. No. 6944. **93062.** No. 6949.

93063. No. 6984. *Po ts'ai.* Obtained through Dr. Hugh W. Hubbard, Paotingfu, March 15, 1931.

93064. No. 6997. From Shanghai, March 24, 1931.

93065. VIBURNUM sp. Caprifoliaceae.

No. 6932. From the Botanical Garden at Hangchow. Seed of a plant about 8 feet high and 2 or 3 years old.

93066. CORDIA TECTONAEFOLIA Hort. Boraginaceae.

From India. Seeds presented by B. S. Nirody, Secretary, Agricultural-Horticultural Society of Madras. Received April 25, 1931.

Said to be closely related to *Cordia sebestena,* but is larger and has lighter scarlet flowers.

93067. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Puerto Rico. Seeds presented by the Puerto Rico Agricultural Experiment Station. Received April 20, 1931.

Haitien perennial cotton. From a planting of Mateo Fajardo, jr., of Mayaguez.

93068 to 93070.

From Lithuania. Seeds presented by Frank Kakaska, Mariampole. Received April 21, 1931.

93068. ANTHYLLIS VULNERARIA L. Fabaceae. **Kidney-vetch.**

A perennial herb, found throughout Europe, northern Africa and Asia, which is grown for sheep fodder and is particularly recommended for lime soils.

For previous introduction see 84275.

93069. ONOBRYCHIS VULGARIS Hill (*O. viciaefolia* Scop.). Fabaceae. **Sanfoin.**

A pink-flowered, herbaceous perennial, 1 to 2 feet high, native to Europe.

For previous introduction see 77875.

93070. ORNITHOPUS SATIVUS Brot. Fabaceae. **Serradella.**

For use as winter forage and as a green manure.

For previous introduction see 81546.

93071 and 93072.

From South Africa. Bulbs purchased from K. C. Stanford, Stellenbosch. Received April 21, 1931.

93071. LACHENALIA TRICOLOR AUREA (Lindl.) Hook. f. Liliaceae. **Cape-cowslip.**

A herbaceous perennial, native to South Africa, closely resembling *Lachenalia rubida*, but the flowers are bright orange-yellow.

For previous introduction see 79565.

93072. LACHENALIA TRICOLOR Jacq. Liliaceae. **Threecolor Cape-cowslip.**

A bulbous perennial, native to southern Africa, with usually two radical, tongue-shaped, often spotted leaves 1 foot long, and a scape 1 foot high bearing a raceme of three or more tubular flowers, the lower ones nodding. The outer segments of the perianth are yellow with green tips, and the inner segments are purplish red and longer than the outer ones.

93073 to 93075.

From Hawaii. Seeds presented by Harold L. Lyon, in charge, Department of Botany and Forestry, Experiment Station, Hawaiian Sugar Planters' Association. Received April 21, 1931.

93073. SAGUERUS LANGKAB Blume (*Arenga obtusifolia* Mart.). Phoenicaceae. **Palm.**

A Javanese palm, related to the sugar palm (*Arenga saccharifera*) of the Malay Archipelago, with a spineless thick-ringed trunk 20 feet high and 9 to 13 pinnate leaves about 15 feet long which have spiny petioles.

For previous introduction see 79565.

93073 to 93075—Continued.

93074. BARRINGTONIA ASIATICA (L.) Kurz. Lecythidaceae.

A large handsome tree 50 feet high, with thick leathery leaves, bright green and 1 foot long, racemes of large showy flowers having white petals, and crimson-tipped stamens resembling a brush. The smooth shining black fruits are shaped like a 4-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 80176.

93075. HAEMATOXYLUM CAMPECHIANUM L. Caesalpiniaceae. **Logwood.**

A tropical American tree up to 40 feet high, which yields the logwood of commerce used for dyes and inks.

For previous introduction see 76756.

93076 to 93084.

From England. Seeds presented by Edwin Beckett, Aldenham House Gardens, Elstree, Herts. Received April 22, 1931.

93076. ACER CAPPADOCICUM Gleditsch (*A. laetum* Meyer). Aceraceae. **Maple.**

Variety *aureum;* a form with red and golden-yellow leaves.

93077. ACER LAXIFLORUM Pax. Aceraceae. **Maple.**

A tree up to 50 feet high with cordate-oblong leaves 4 inches long, having two to four short lobes near the base and serrate margins. The yellowish flowers are borne in slender pendulous racemes and are followed by winged fruits spreading at right angles. It is native to western China.

93078. NOTHOFAGUS OBLIQUA (Mirb.) Oerst. Fagaceae.

A tall deciduous tree with oval-oblong, clear-green leaves and 3-seeded fruits. The wood, which is considered valuable timber, varies in quality with the nature of the soil. In Chile the wood is used as blocks for street paving. It is considered the most northerly of the Chilean beeches.

For previous introduction see 52593.

93079 to 93083. ROSA spp. Rosaceae. **Rose.**

93079. ROSA BANKSIOPSIS Baker. **False Banksian rose.**

An erect shrubby rose, common in western Hupeh, China, where it is found on mountain slopes at altitudes between 4,000 and 7,000 feet. The flowers are rose red and the fruits are coral red.

For previous introduction see 66481.

93080. ROSA OMEIENSIS Rolfe. **Mount Omei rose.**

Variety *atrosanguinea*; a red-flowered form.

For previous introduction see 59264.

93081. ROSA SETIPODA Hemsl. and Wils. **Nodfruit rose.**

A shrub often 10 feet high, native to central China, with pairs of wide-based, straight prickles, seven to nine elliptical leaflets, loose corymbs of pale-pink flowers 2 inches across, and

93076 to 93084—Continued.

oblong-ovoid, deep-red fruits 1 inch long.

For previous introduction see 54232.

93082. ROSA WILLMOTTIAE Hemsl. **Willmott rose.**

A western Chinese rose, forming a densely branched shrub often 10 feet high, with seven obovate leaflets, solitary, rose-purple flowers, and bright orange-red globose fruits.

For previous introduction see 54247.

93083. ROSA sp.

Purdon No. 845.

93084. STYRAX HEMSLEYANA Diels. Styracaceae.

A handsome Chinese shrub or small tree up to 20 feet high, with sharp-pointed obliquely oval leaves and pure-white flowers nearly half an inch long in racemes about 6 inches long.

For previous introduction see 78155.

93085 to 93098.

From Sweden. Seeds presented by Dr. Robert E. Fries, Director, Botanic Garden, Stockholm. Received April 22, 1931.

93085 to 93088. CREPIS spp. Cichoriaceae.

The various species of Crepis are weedy herbaceous plants belonging to the lettuce family. The following were introduced for genetic studies, not for propagation.

93085. CREPIS ASPERA L.

For previous introduction see 66800.

93086. CREPIS BLATTARIOIDES (L.) Vill.

For previous introduction see 66802.

93087. CREPIS PULCHRA L.

93088. CREPIS TECTORUM L.

For previous introduction see 66524.

93089 and 93090. DATURA spp. Solanaceae.

The daturas are large, coarse plants likely to become weeds. These species were introduced for genetic studies, not for distribution.

93089. DATURA BERNHARDII Lundstroem.

93090. DATURA CERATOCAULA Jacq.

93091 to 93093. KALANCHOE spp. Crassulaceae.

93091. KALANCHOE CRENATA Haw.

A succulent perennial native to tropical Africa, 2 to 3 feet high, with a thick fibrous root, oblong or roundish, oval-crenate leaves about 2 inches long, and bright-yellow flowers half an inch long in terminal and axillary cymes.

For previous introduction see 86824.

93092. KALANCHOE SCHUMACHERI Koord.

An erect or ascending succulent 1 to 2 feet high, with oblanceolate doubly serrate leaves 5 to 8 inches long and axillary and terminal cymes of yellow flowers. It is native to Java.

For previous introduction see 86826.

93085 to 93098—Continued.

93093. KALANCHOE SPATHULATA DC.

A succulent perennial 1 to 4 feet high with the lower leaves spatulate crenate, 3 to 10 inches long, and the upper leaves, 3 to 4 inches long, very narrow and sometimes trifoliolate. The clear yellow flowers are in flattish corymbs. Native to tropical Asia.

For previous introduction see 86827.

93094 to 93098. SOLANUM spp. Solanaceae.

Introduced for genetic studies, not for distribution.

93094. SOLANUM CITRULLIFOLIUM A. Br.

93095. SOLANUM GILO Raddi.

93096. SOLANUM GUINEENSE L.

93097. SOLANUM INSULAE-PASCHALIS Bitter.

93098. SOLANUM SISYMBRIFOLIUM Lam.

A plant with small round black fruit.

For previous introduction see 91553.

93099 to 93107.

From Bulgaria. Seeds presented by Dr. A. Atanasoff, University of Sofia, through J. G. Dickson, United States Department of Agriculture. Received April 24, 1931.

93099. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

93100. CICER ARIETINUM L. Fabaceae. **Chickpea.**

93101. GOSSYPIUM HIRSUTUM L. Malvaceae **Upland cotton.**

93102. ORYZA SATIVA L. Poaceae. **Rice.**

93103. ORYZA SATIVA L. Poaceae. **Rice.**

93104. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

93105. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

93106. PIMPINELLA ANISUM L. Apiaceae. **Anise.**

93107. SESAMUM ORIENTALE L. Pedaliaceae. **Sesame.**

93108 to 93126.

From China. Seeds presented by Prof. Hsen-Hsu Hu, Fan Memorial Institute of Biology, Peiping. Received April 24, 1931.

A collection of seeds of native plants from Hopei Province.

93108. ACANTHOPANAX SENTICOSUM (Rupr.) Harms. Araliaceae.

A hardy spiny shrub with large palmate leaves and umbels of black berries.

For previous introduction see 72398.

93109. ACANTHOPANAX SESSILIFLORUM (Rupr. and Maxim.) Seem. Araliaceae.

A vigorous deciduous shrub with stout branches armed with only a few prickles. It forms a large spreading bush 10 feet high with 3-lobed or 5-lobed, irregularly toothed leaves. The flowers, brownish purple with yellow protruding stamens, are packed closely in a spherical, almost stalkless cluster about 1 inch in

93108 to 93126—Continued.

diameter, and appear in July. The inky black berries are in round clusters, about an inch thick. This is one of the hardiest shrubs introduced from northern China.

For previous introduction see 76105.

93110. ACER TRUNCATUM Bunge. Aceraceae. **Maple.**

A small tree up to 25 feet high. The deeply 5-lobed leaves, truncate at the base, are 3 to 4 inches across, and the greenish-yellow flowers, borne in erect corymbs, are followed by winged fruits which spread nearly at right angles.

93111. BETULA COSTATA Trautv. Betulaceae. **Birch.**

A brown or yellow birch which becomes 75 to 100 feet high and from 2 to 3 feet in diameter.

For previous introduction see 65487.

93112. BETULA JAPONICA MANDSHURICA (Regel) Winkl. Betulaceae. **Birch.**

A white-barked birch up to 80 feet high, with the leaves often broadly wedge shaped at the base.

For previous introduction see 76735.

93113. CARPINUS TURCZANINOVII Hance. Betulaceae. **Hornbeam.**

A hardy shrubby tree with oval, sharp-pointed leaves 1 to 2 inches long. It is said to resemble *Carpinus polyneura*, also a Chinese species, and may have value as an ornamental.

For previous introduction see 63679.

93114. DEUTZIA PARVIFLORA Bunge. Hydrangeaceae. **Mongolian deutzia.**

A hardy ornamental shrub 6 feet high with corymbs of white flowers.

For previous introduction see 71145.

93115. EVODIA DANIELLII (Benn.) Hemsl. Rutaceae.

A bushy tree, 10 to 20 feet high, with unequally pinnate leaves up to 3 inches long, numerous corymbose panicles of whitish flowers which appear in June and July, and oblong or elongated fruit capsules which have a peculiar aromatic odor and a pungent bitter flavor.

For previous introduction see 76056.

93116. FRAXINUS CHINENSIS Roxb. Oleaceae. **Chinese ash.**

An ornamental tree 40 feet high with glabrous branchlets and brownish-black winter buds, covered with a rufus woolly tomentum when opening. The leaves, 5 to 8 inches long, are composed of five to seven short-stalked pinnate leaflets, cuneate at the base, dark green above and light green below. The panicles of small white flowers are followed by 1-seeded winged fruits.

For previous introduction see 63792.

93117. HYDRANGEA BRETSCHNEIDERII Dipp. Hydrangeaceae. **Shaggy hydrangea.**

A stout bushy shrub 8 to 10 feet high, with rough bark, dull-green slender-pointed leaves, and flattened corymbs, 4 or 5 inches wide, of white flowers which become rosy. This hardy hydrangea thrives best in a sunny position in good soil.

For previous introduction see 58152.

93108 to 93126—Continued.

93118. LARIX DAHURICA PRINCIPIS-RUPPRECHTII (Mayr) Rehd. and Wils. Pinaceae. **Larch.**

A hardy handsome tree, sometimes 70 feet high, with attractive bright-green foliage and shiny cones over 1 inch long.

For previous introduction see 71123.

93119. LESPEDEZA BICOLOR Turcz. Fabaceae. **Shrub bushclover.**

A bushy herbaceous perennial which bears a profusion of rose-purple flowers during the early autumn, practically covering the drooping branches, which sometimes become 6 feet long.

For previous introduction see 90664.

93120. OSTRYA LIANA Hu. Betulaceae. **Hophornbeam.**

A tree up to 50 feet high with grayish-black bark. The thin membranous cordate-elliptic leaves are 2 to 4 inches long, and the small saclike fruits are borne in dense clusters of 8 to 10.

93121. PICEA WILSONI Masters. Pinaceae. **Spruce.**

A pyramidal tree up to 80 feet high, with short spreading branches densely clothed with stout, straight or curved, needlelike dark-green leaves less than 1 inch long. The cylindric-oblong cones, 2 to 4 inches long, persist for a year after ripening.

93122. SORBUS ALNIFOLIA (Sieb. and Zucc.) Koch. (*Pyrus alnifolia* Franch.). Malaceae. **Mountain-ash.**

An upright tree with a dense round head, attractive bright-green foliage, and clusters of small red and yellow fruits.

For previous introduction see 82332.

93123. SYRINGA PEKINENSIS Rupr. Oleaceae. **Peking lilac.**

A large shrub up to 18 feet high. The slender spreading branches are brownish red; the ovate-lanceolate leaves, 2 to 4 inches long, are dark green above and grayish green beneath; and the yellowish-white flowers are borne profusely in panicles 6 to 8 inches long.

93124. SYRINGA VILLOSA Vahl. Oleaceae. **Late lilac.**

A bushy lilac about 8 feet high, with stout upright branches, broadly oval bright-green leaves, and pinkish-lilac flowers in panicles 3 to 7 inches long.

For previous introduction see 79052.

93125. VITEX NEGUNDO INCISA (Lam.) C. B. Clarke. Verbenaceae. **Cutleaf chaste-tree.**

A half-woody wild shrub or small tree with 5-parted leaves and loose terminal clusters of pale bluish flowers. The leaves are fragrant when crushed, and the flowers are freely visited by bees.

For previous introduction see 63649.

93126. DIERVILLA FLORIDA (Bunge) Sieb. and Zucc. (*Weigela rosea* Lindl.). Caprifoliaceae. **Pink weigela.**

A shrub up to 10 feet high, with short-petioled, serrate leaves 2 to 4 inches long, tomentose beneath. The tubular flowers, more than 1 inch long, rosy pink outside and paler inside, are borne in axillary cymes.

93127 to 93143.

From the Netherlands. Bulbs and roots purchased from C. G. Van Tubergen (Ltd.), Zwanenburg Nurseries, Haarlem. Received April 24, 1931.

93127 to 93141. CRINUM spp. Amaryllidaceae.

Nos. 93127 to 93132 are bulbs native to southern Africa.

93127. CRINUM LONGIFOLIUM (L.) Thunb. (*Amaryllis longifolia* L.). **Hardy crinum.**

Variety *album*. A perennial with 12 or more strap-shaped leaves 2 to 3 feet long and a scape crowned with a cluster of 6 to 12 tubular white flowers 3 or 4 inches long.

93128. CRINUM sp.

Variety *H. J. Elwes*.

93129. CRINUM LONGIFOLIUM (L.) Thunb. (*Amaryllis longifolia* L.). **Hardy crinum.**

A perennial with 12 or more strap-shaped leaves 2 to 3 feet long and a scape crowned with a cluster of 6 to 12 tubular red flowers 2 to 4 inches long.

93130. CRINUM LONGIFOLIUM (L.) Thunb. (*Amaryllis longifolia* L.). **Hardy crinum.**

Variety *album*.

For previous introduction see 93127.

93131. CRINUM MOOREI Hook. f. **Longneck crinum.**

A perennial with 12 to 15 strap-shaped leaves 2 to 3 feet long, and a scape 2 to 3 feet high crowned with funnel-shaped flowers having a greenish tube 3 inches long and a pinkish limb of equal length.

93132. CRINUM MOOREI Hook. f. **Longneck crinum.**

Variety *album*. A form with white flowers.

93133. CRINUM PEDUNCULATUM R. Br.

Bulbs of a perennial native to Australia, with 25 to 30 leaves and an umbel of 20 to 30 greenish-white, salver-shaped flowers having linear spreading segments and red anthers.

93134 to 93141. CRINUM POWELLII Baker. **Powell crinum.**

A bulbous plant with about 20 spreading strap-shaped leaves 3 to 4 feet long and about 8 rose-colored flowers in large showy heads, terminating a scape 1 foot or more high. It is considered to be a hybrid between *Crinum longifolium* and *C. mooreï*.

For previous introduction see 79993.

93134. Typical form.

93135. *Album*.

93136. *Harlemense*.

93137. *Intermedium*.

93138. *Krelagei*.

93139. *Prainianum*.

93140. *Rattrayi*.

93141. *Yemense*.

93142. RANUNCULUS ACONITIFOLIUS L. Ranunculaceae. **Aconite buttercup.**

Roots of the variety *fl. pleno*.

93127 to 93143—Continued.

93143. RANUNCULUS ACRIS L. Ranunculaceae. **Tall buttercup.**

Roots of the variety *fl. pleno*.

93144 to 93152. ASTER spp. Asteraceae.

From The Pas, Manitoba, Canada. Plants collected by Knowles A. Ryerson, Bureau of Plant Industry; W. A. Alderman, Minnesota Agricultural Experiment Station; and W. R. Leslie, superintendent of the experiment station, Morden, Manitoba. Received September 30, 1929. Numbered in April, 1931.

93144 and 93145. ASTER LINDLEYANUS Torr. and Gray. **Lindley aster.**

A perennial aster up to 6 feet high, with rather thick, sharply serrate ovate leaves 2 to 4 inches long and loose panicles of blue or violet flower heads 1 inch across. It is native to the northern part of North America.

93144. No. 106. A variety with purple flowers.

93145. No. 125. A variety with blue flowers.

93146. ASTER PANICULATUS Lam.

No. 127. A strain with pink flowers. A perennial branched aster 2 to 8 feet high, with lanceolate to linear, serrate leaves 3 to 6 inches long. The numerous flower heads, 1 inch across, are usually white or tinged with violet. It is native to the northern part of North America.

93147. ASTER NOVAE-ANGLIAE L. **New England aster.**

No. 172. A strain with dark-red flowers. A perennial herb with stout leafy stems 2 to 8 feet high, native to the eastern part of North America. The thin, lanceolate leaves clasp the stem by an auriculate base, and the flower heads, often 2 inches across, are usually violet-purple, but vary through red and pink to white.

93148. ASTER LAEVIS L. **Smooth aster.**

No. 174. A strain with light-blue flowers. A stout glabrous herbaceous perennial 2 to 4 feet high, native to North America. The thick, usually entire leaves are 1 to 4 inches long, and the flower heads, about 1 inch broad, are violet or light blue.

93149. ASTER sp.

No. 175. Flowers blue.

93150. ASTER MULTIFLORUS Ait. **Wreath aster.**

No. 177. A bushy, much-branched, herbaceous perennial 1 to 7 feet high, native to eastern North America. The leaves on the main stem are linear, entire, and 1 to 2 inches long. On the branches the leaves are very small and closely crowded. The small white flower heads, one-fourth of an inch across, are crowded on the 1-sided branches, forming a dense mass.

93151. ASTER PANICULATUS Lam.

No. 179.

For previous introduction and description see 93146.

93152. ASTER NOVAE-ANGLIAE L. **New England aster.**

93144 to 93152—Continued.

No. 180. A strain with dark-purple flowers.

For previous introduction and description see 93147.

93153 to 93168.

From the Netherlands. Bulbs and roots purchased from C. G. Van Tubergen (Ltd.), Zwanenburg Nurseries, Haarlem. Received April 25, 1931.

93153. ALLIUM PULCHELLUM Don. Liliaceae.

An onion with narrow-linear leaves about 1 foot long and a rather dense umbel of bell-shaped violet flowers. Native to Asia Minor.

For previous introduction see 90947.

93154. ZEPHYRANTHES CANDIDA (Lindl.) Herb. (*Amaryllis candida* Lindl.). Amaryllidaceae. **Autumn zephyrlily.**

A subtropical bulbous plant with linear leaves 1 foot long, appearing with the flowers; these are white, often rose tinted on the outside, and about 2 inches long. It is native to Argentina.

For previous introduction see 80015.

93155. SPREKELIA FORMOSISSIMA (L.) Herb. (*Amaryllis formosissima* L.). Amaryllidaceae. **St. James lily.**

A bulbous perennial, native to Mexico, with 3 to 6 linear leaves 1 to 2 feet long, a scape 1 foot high, and 1 large gaping bright-red flower 3 to 4 inches long.

93156 and 93157. POLYGONATUM VERTICILLATUM (L.) All. Convallariaceae. **Solomonseal.**

A perennial herb with a creeping knotted rootstock, angled and grooved stems 2 to 4 feet high, whorls of 4 to 8 linear leaves 3 to 6 inches long, and axillary peduncles bearing 2 to 3 tubular whitish flowers with green tips, followed by red berries. It is native to Europe and temperate Asia.

93156. Variety *macrophyllum*. Possibly a distinct variety with more robust habit and larger leaves.

93157. Typical form.

93158 to 93160. HIPPEASTRUM spp. Amaryllidaceae.

93158. HIPPEASTRUM AULICUM Herb.

A bulbous perennial with 6 to 9 broadly linear leaves 1 to 2 feet long and a scape 2 feet high bearing, usually, 2 large bright-red tubular flowers having segments 5 to 6 inches long and a green corona in the throat of the flower. It is native to Brazil.

93159. HIPPEASTRUM RETICULATUM (L'Her.) Herb.

A bulbous perennial with bright-green radical leaves 1 foot long and a scape the same height bearing three to six flowers 4 to 5 inches across. The obovate segments of the perianth are mauve to purple red with bars and cross lines of crimson. It is native to Brazil.

Variety *striatifolium*. A form with broader leaves, having a white keel.

93160. HIPPEASTRUM RUTILUM (Edwards) Herb.

93153 to 93168—Continued.

A perennial with small bulbs, 2 to 3 inches in diameter, and bright-green leaves 1 foot long and over 1 inch wide; the glaucous scape, as long as the leaves, is somewhat compressed and bears two to four red flowers. It is a good house plant and flowers every year in living rooms, often sending up two or more flower stalks.

For previous introduction see 54042.

93161 to 93167. HYMENOCALLIS spp. Amaryllidaceae.

93161. HYMENOCALLIS CALATHINA (Ker) Nichols. **Lilybasket.**

A bulbous perennial, native to Peru and Bolivia, with 6 to 8 strap-shaped leaves less than 2 feet long and a 2-edged scape about 2 feet high, bearing a sessile umbel of 2 to 5 flowers. The perianth tube, 3 to 4 inches long, is green and is enlarged above; the lanceolate segments, as long as the tube, are white; and the corollalike cup is green striped with rounded, fringed lobes.

93162. HYMENOCALLIS CONCINNA Baker.

A Mexican spiderlily with a relatively small bulb and ovate sessile leaves 1 inch wide and 1 foot long. The flowers are in a dense umbel, the slender perianth tube is 2 inches long, and the linear lobes are the same length. The basal cup is funnel shaped and half an inch long, and the anthers are long and slender.

93163. HYMENOCALLIS FESTALIS Hort.

A name for which a place of publication and a description have not been found.

93164. HYMENOCALLIS HARRISIANA Herb. **Lilybasket.**

A bulbous perennial, native to Mexico, with 3 to 6 narrowly obovate leaves 1 foot long, a slender glaucous scape shorter than the leaves, and a sessile umbel of 2 to 3 fragrant white flowers. The tube is 3 to 4 inches long, the linear segments are about 3 inches long, and the funnel-shaped cup is plicated and toothed.

93165. HYMENOCALLIS sp.

Sulphur Beauty.

93166. HYMENOCALLIS sp.

Sulphur Gem.

93167. HYMENOCALLIS sp.

Sulphur Queen.

93168. RANUNCULUS MONTANUS DENTATUS Baumg. (*R. carpaticus* Herbich). Ranunculaceae. **Buttercup.**

A perennial herb with a short, creeping rootstock, pubescent stems 6 to 12 inches high, 3-parted to 5-parted leaves with linear dentate lobes, and bright-yellow flowers more than 1 inch across. It is native to the mountains of Europe.

93169 to 93222.

From India. Seeds presented by the curator, Lloyd Botanic Garden, Darjeeling.

Received April 27, 1931.

A collection of eastern Himalayan plants.

93169 to 93222—Continued.

93169. ABROMA AUGUSTA L. f. Sterculiaceae.

A semishrubby herbaceous plant with large cordate hairy leaves, small purple flowers, and large angular seed pods, over 1 inch across, containing large quantities of small black seeds.

For previous introduction see 67794.

93170. ABRUS LAEVIGATUS E. Mey. (*A. pulchellus* Wall.). Fabaceae.

A climbing shrub, native to India and Ceylon, closely resembling the common rosary-pea (*Abrus precatorius*), but the leaflets are larger and more numerous, the reddish flowers are in longer racemes, and the incurved pods are thinner and longer and have more seeds.

93171. ACACIA CATECHU (L. f.) Willd. Mimosaceae.

A tree found in the wild parts of India and Burma, where it sometimes becomes 70 feet high, though usually smaller. The leaves are finely pinnate, and the white or pale-yellow flowers are in spikes. The pale-yellow gum obtained from this acacia has very strong adhesive powers and is considered a better substitute for the true gum arabic than that of *A. scorpioides*.

For previous introduction see 68325.

93172. ACER OBLONGUM Wall. Aceraceae. **Maple.**

A subtropical maple which becomes 40 to 50 feet high, with a trunk 1 or 2 feet in diameter and dark-green oblong entire leaves up to 7 inches long. The reddish wood is used for making agricultural implements.

For previous introduction see 68329.

93173. ACTINIDIA STRIGOSA Hook. f. and Thoms. Dilleniaceae.

A woody vine, resembling *A. callosa*, with strigose-hispid ovate leaves 5 inches long, axillary cymes of white flowers nearly 1 inch across, and ovoid edible fruits.

For previous introduction see 86665.

93174. ADENOSACME LONGIFOLIA Wall. Rubiaceae.

A small shrub with brittle branches covered with bright-yellow spongy bark. The elliptic-lanceolate leaves are 4 to 10 inches long; the fleshy tubular yellow flowers, 1 inch long, are borne in cymes 6 to 8 inches across; and the round berries, one-fourth of an inch in diameter, are white. This shrub is native to the subtropical slopes of the Himalayas in India.

93175. ALANGIUM CHINENSE (Lour.) Rehd. (*Marlea begoniaefolia* Roxb.). Cornaceae.

This tree makes a remarkably rapid growth, reaching its full height of 50 feet in five years, after which the trunk merely thickens. The tree is planted for the timber.

For previous introduction see 67175.

93176. ALBIZZIA LUCIDA (Roxb.) Benth. Mimosaceae.

A handsome spreading leguminous tree with attractive feathery leaves, native to the East Indies.

For previous introduction see 75974.

93169 to 93222—Continued.

93177. ALLIUM VICTORIALIS L. Liliaceae. **Onion.**

One of the most distinct European alliums, with stems about 2 feet high, leaves resembling those of lily-of-the-valley, and white or greenish-white flowers.

For previous introduction see 86666.

93178. ALLOPHYLUS ZEYLANICUS L. Sapindaceae.

A shrub or small tree, native to India and Ceylon, with ovate to obovate leaves 8 to 16 inches long, and racemes 9 inches long of small yellowish-white, globular flowers followed by red berries.

93179. ALNUS NEPALENSIS D. Don. Betulaceae. **Alder.**

A tree up to 70 feet high, with a trunk 3 to 4 feet in diameter, found between 4,000 and 7,000 feet altitude. It is a rapid grower, used chiefly for firewood.

For previous introduction see 68330.

93180. AMMANNIA PEPLOIDES Spreng. Lythraceae.

A low glabrous annual, erect or decumbent, 3 to 12 inches high, with opposite elliptic leaves less than 1 inch long and axillary spikes of small pink flowers.

93181. AMOORA DECANDRA (Wall.) Hiern. Meliaceae.

A large spreading tree, native to India, with compound leaves 1 foot long, made up of 7 to 13 ovate leaflets 8 inches long and panicles composed of cylindrical racemes 6 inches long of small globular fragrant yellow flowers.

93182. AMOORA ROHITUKA (Roxb.) Wight and Arn. Meliaceae.

An evergreen tree with a large crown of branches. The pale-yellow or red fruit, over an inch in diameter, is smooth, rather soft and fleshy, three celled and three valved. An economic oil is extracted from the seeds.

For previous introduction see 38998.

93183. ANEMONE RIVULARIS Buch.-Ham. Ranunculaceae.

A silky pubescent ornamental from 1 to 3 feet high, with 3-parted basal leaves up to 6 inches in diameter and white or bluish flowers, over an inch long, in compound cymes. It is found at 5,000 feet altitude.

For previous introduction see 66917.

93184. ARALIA FOLIOLOSA Seem. Araliaceae.

A large prickly shrub, native to India, with bipinnate or tripinnate leaves made up of elliptic-acuminate leaflets 2 to 3 inches long and compound panicles 1 foot long of small greenish flowers followed by small black fruits.

93185. PANAX PSEUDOGINSENG Wall. Araliaceae. **Ginseng.**

A perennial herb whose tuberlike rootstock is mucilaginous and slightly aromatic. The erect purplish stem bears three or four palmate radical leaves and a number of roughly hairy upper leaves. The small white flowers, in umbellate

93169 to 93222—Continued.

heads, are followed by globose berries which are half black and half red or entirely red.

For previous introduction see 58492.

93186. ARDISIA MACROCARPA Wall. Myrsinaceae.

A shrub 1 to 4 feet high with narrowly ovate leaves having crisped-crenate margins bearing conspicuous glands in the crenations. The umbels of inconspicuous flowers are followed by dotted, bright-red berries one-half to one-third of an inch in diameter.

93187. ARDISIA NERIIFOLIA Wall. Myrsinaceae.

A large shrub with erect branches, terminated by panicles of small pink flowers, resembling the oleander. The narrowly obovate leaves are 5 to 7 inches long, and the globose-pentagonal berries one-fifth of an inch in diameter, are deep red. It is native to the subtropical slopes of the Himalayas in India.

93188. ARISAEMA NEPENTHOIDES (Wall.) Mart. Araceae.

A bulbous perennial, closely related to the American Indian turnip (*Arisaema triphyllum*). The two leaves are each made up of five sessile oblanceolate leaflets; the spathe, 6 to 8 inches long, has a cylindric tube 3 to 4 inches long and a limb whitish within and yellow without. On each side at the base of the limb is an auricle 1 inch broad, which is recurved and is spotted with brown and has a broad brown margin.

93189. CORTIA HOOKERI C. B. Clarke. Apiaceae.

A stemless, herbaceous perennial with a rosette of three to four times pinnate leaves, the ultimate segments being linear and about one-fourth of an inch long. The white or purplish flowers are borne in sessile umbels, which are up to 8 inches long and form a dense mass over the crown of the plant. It is native to the Sikkim region in India.

93190. CORYLUS FEROX Wall. Betulaceae. **Hazelnut.**

A wild hazel from Sikkim, India, whose small nuts, closely resembling the common hazelnut in taste, are much prized by the natives. The tree, 20 feet in height, grows at altitudes between 8,000 and 10,000 feet. The wood is pinkish white, even grained, and moderately hard.

For previous introduction see 73151.

93191 to 93195. MEIBOMIA spp. Fabaceae.

93191 and 93192. MEIBOMIA HETEROCARPA (L.) Kuntze.

An erect or suberect undershrub. All of the bushy species of this genus are said to contain good fibers, used in some cases for paper making.

For previous introduction see 47723.

93191. Received as *Desmodium gyrans* DC.

93192. Received as *Desmodium polycarpum* DC.

93193. MEIBOMIA FLORIBUNDA (D. Don) Kuntze (*Desmodium floribundum* Don).

93169 to 93222—Continued.

A woody, thickly pubescent Himalayan plant abundantly covered with axillary and terminal racemes of red flowers.

For previous introduction see 86684.

93194. MEIBOMIA TILIAEFOLIA (D. Don) Kuntze (*Desmodium tiliaefolium* DC.).

A hardy and more or less ornamental deciduous shrub, with slender terete branches, thick green trifoliolate leaves about 4 inches long, and red flowers in lax racemes often a foot long. It is native to the Himalayas from 3,000 to 9,000 feet altitude. The bark yields an excellent fiber, which is used in rope making; the leaves are good fodder, and the roots are used medicinally as a tonic and diuretic.

For previous introduction see 86692.

93195. MEIBOMIA TRIFLORA (L.) Kuntze (*Desmodium triflorum* DC.).

A small herbaceous annual which covers the ground with a dense mat resembling clover.

For previous introduction see 85746.

93196. DICELLOSTYLES JUJUBIFOLIA (Griffith) Benth. Malvaceae.

A tree, more or less hairy throughout, with ovate leaves about 3 inches long and white flowers, over 1 inch in diameter, in panicles.

For previous introduction see 47673.

93197. DICENTRA SCANDENS (D. Don) Walp. Papaveraceae.

A perennial herb found between 5,000 and 6,000 feet altitude. The graceful angled stem is slender and bears yellow or purple flowers, nearly an inch long, in racemes of 8 to 12, which are followed by membranous lanceolate capsules.

For previous introduction see 49630.

93198. DICENTRA THALICTRIFOLIA (Wall.) Hook. f. and Thoms. Papaveraceae.

A slender climbing plant with a perennial root, native to the temperate regions of the Himalayas, at altitudes between 4,000 and 5,000 feet. It is very similar to *Dicentra scandens* except for the thick fleshy ovate-cordate capsule.

For previous introduction see 49631.

93199. DICHROA FEBRIFUGA Lour. Hydrangeaceae.

A tall shrub, abundant in the temperate Himalayas from 5,000 to 8,000 feet altitude. It has narrow leaves 3 to 8 inches long, terminal panicles of blue or purplish flowers, and berries of an intense blue.

For previous introduction see 73152.

93200. DOBINEA VULGARIS Buch.-Ham. Anacardiaceae.

A branching shrub with opposite elliptic acutely serrate leaves 4 to 6 inches long. The minute flowers are in lax panicles, the staminate are campanulate, the pistillate are apetalous. The narrow capsule has winged margins.

For previous introduction see 49632.

93169 to 93222—Continued.

93201. DRACOCEPHALUM SPECIOSUM Benth. Menthaceae. **Dragonhead.**

A robust herbaceous perennial 18 inches high with radical leaves on petioles up to 1 foot long. The leaf blades are orbicular-cordate, crenate, and 2 to 4 inches across; the tubular flowers, 1 inch long, are blue purple with black spots and are borne in dense heads. It is native to the Himalayas in India.

93202. DYSOXYLUM BINECTARIFERUM (Roxb.) Hook. f. Meliaceae.

An evergreen tree, 30 feet or more in height, with compound leaves 9 to 18 inches long, composed of five to nine leaflets, and panicles of pale-green flowers. The leathery reddish fruits are over 2 inches long, and the dark-purple seeds are polished.

For previous introduction see 47840.

93203. SLOANEA DASYCARPA (Benth.) Hemsl. (*Echinocarpus dasycarpus* Benth.). Elaeocarpaceae.

A Chinese tree about 15 feet high, with rigidly erect flowering branches. The lanceolate leaves are coriaceous; the nodding flowers are axillary or in terminal corymbs; the sepals are broad, and the cup-shaped corolla is toothed and scarcely longer than the very numerous stamens. The prickly capsule dehisces into 5 valves, each valve bearing a fleshy golden aril containing 4 or 5 seeds.

For previous introduction see 49655.

93204. ELAEOCARPUS SIKKIMENSIS Masters. Elaeocarpaceae.

A handsome evergreen tree, native to Sikkim, India, with erect racemes of small white flowers and sharp-pointed serrate leaves about 8 inches long.

For previous introduction see 65251.

93205. ELSHOLTZIA DENSA Benth. Menthaceae.

A dwarf annual, 6 to 18 inches high, native to northeastern India and western Tibet. The slender stems are branched from the base, the ovate to elliptic leaves are 1 to 3 inches long, and the small lavender flowers are borne in spikes about 2 inches long.

93206. ELSHOLTZIA FLAVA Benth. Menthaceae.

A bushy annual, 3 to 5 feet high, native to the temperate slopes of the Himalayas in India. The long-petioled, cordate leaves are 4 to 8 inches long, and the small yellow flowers are borne in axillary and terminal spikes 2 to 4 inches long.

93207. ENKIANTHUS DEFLEXUS (Griffith) C. Schneid. (*E. himalaicus* Hook. f. and Thoms.). Ericaceae.

The whorled branches of this Himalayan shrub are characteristic of the entire genus and give the plant a peculiar appearance. The branchlets are red and the margins and petioles of the obovate leaves, 1 to 3 inches long, are red when the leaves are young. The flowers, produced in dense, drooping racemes, have yellow corollas, striped dark red, with darker lobes.

For previous introduction see 76187.

93208. EPILOBIUM ORIGANIFOLIUM Lam. Onagraceae.

93169 to 93222—Continued.

A greatly variable herbaceous perennial with stems usually 8 inches high, but often up to 2 feet. The opposite ovate nearly sessile leaves are 1 inch long, but the leaves are sometimes petioled and 3 inches long. The small, purple to white flowers are axillary or gathered into spikes at the ends of the branches. It is native to the alpine slopes of the Himalayas in India.

93209. EPILOBIUM RETICULATUM C. B. Clarke. Onagraceae.

A perennial herb with pubescent stems 2 to 4 feet high, narrowly lanceolate, minutely denticulate leaves 3 to 6 inches long, and rose-purple flowers nearly 1 inch across, in terminal spikes. It is native to the Sikkim region in India.

93210. ERIANTHUS RUFIPILUS (Steud.) Griseb. (*E. fulvus* Nees). Poaceae. **Plume grass.**

A perennial grass found in the temperate Himalayas between 5,000 and 7,000 feet altitude. The stems are 6 to 8 feet high, and the leaves, 2 to 3 feet long and from one-fourth to 1 inch wide, are slightly rough. The margins of the sheath are hairy. The panicle, 8 to 18 inches long, is gray white or tinged with purple. The spikelets, about one-tenth of an inch long, are concealed by the dense white basal hairs about 1 inch long. The awn is half an inch long.

For previous introduction see 39689.

93211. ERIOBOTRYA PETIOLATA Hook. f. Malaceae.

A stout tree with leathery leaves 6 to 9 inches long and white flowers, half an inch in diameter, appearing in panicles 3 to 6 inches long and broad. It is native to Sikkim, India, and the eastern Himalayas, where it grows at altitudes between 5,000 and 9,000 feet.

For previous introduction see 47679.

93212. ERIOPHYTON WALLICHIANUM Benth. Menthaceae.

A dwarf woolly herbaceous perennial with a stout rootstock, simple stems 4 to 6 inches high, close-set orbicular toothed leaves 2 inches across, and large yellow tubular flowers, 1 to 2 inches long, crowded in the axils of the upper leaves. It is native to the alpine slopes of the Himalayas in Nepal and Sikkim, India.

93213. LILIUM GIGANTEUM Wall. Liliaceae. **Giant lily.**

A lily, native to the Himalayas, with bulbs which grow close to the surface in rich black mold, at altitudes between 7,500 and 9,000 feet, where it is covered with snow from November to April. The smooth hollow stems, 6 to 9 feet high, are sometimes used for musical pipes. The handsome cordate leaves, shining dark green above and paler beneath, are 10 to 12 inches long on petioles of equal length; both become smaller near the apex. In the large white fragrant flowers, often 12 to a raceme, the perianth tube is slightly greenish, and the inner surface of the segments is tinged with deep purple.

For previous introduction see 80010.

93214. MAESA MACROPHYLLA Wall. Myrsinaceae.

A large shrub or small tree, native to the eastern Himalayas. When the bark

93169 to 93222—Continued.

is cut a resinous substance exudes. The wood is light brown and moderately hard.

For previous introduction see 47713.

93215. MUCUNA MACROCARPA Wall. Fabaceae.

A woody climber, native to northeastern India, which has purple flowers and torulose pods over a foot long.

For previous introduction see 61615.

93216. MELOTHRIA MADERASPATANA (L.) Cogn. (*Mukia scabrella* Arn.). Cucurbitaceae.

A rough climbing, cucurbitaceous plant with three to seven angled leaves, small yellow flowers, and bright red fruits up to half an inch in diameter. The leaves are used medicinally as a gentle aperient, and a decoction of the seeds is used as a sudorific.

For previous introduction see 47728.

93217. MUSSAENDA ROXBURGHII Hook. f. Rubiaceae.

An erect undershrub, with hairy stems and oblong-lanceolate leaves, native to the tropical slopes of the Himalayas in India. The yellowish flowers are borne in dense hairy cymes and each flower is subtended by a prominent, white calyx lobe. The fleshy berries are crowned by the persistent calyx.

93218. CLEMENATIS ZEYLANICA (L.) Poir. (*Naravelia zeylanica* DC.). Ranunculaceae.

A climbing shrub, native to India and Ceylon, with trifoliolate leaves having the terminal leaflet changed into a tendril. The solitary axillary flowers, about 1 inch across, have narrow greenish-white petals and yellow stamens.

93219. NEILLIA THYRSIFLORA D. Don. Rosaceae.

A little-branched shrub about 3 feet high, with deeply 3-lobed dentate leaves and terminal thyrsoid racemes of white flowers which appear at the beginning of autumn. It is native to the mountains of Nepal.

For previous introduction see 47739.

93220. PENTAGONIA PHYSALODES (L.) Hiern (*Nicandra physaloides* Gaertn.). Solanaceae. **Apple-of-Peru.**

A blue-flowered Peruvian annual with the fruit inclosed in the husk, as in Physalis. The campanulate flowers, over an inch in diameter, are light blue with a lighter throat; they are produced singly in the axils of the leaves.

For previous introduction see 66527.

93221. NYSSA SESSILIFLORA Hook. f. and Thoms. Cornaceae.

An Asiatic relative of the black gum (*Nyssa sylvatica*), which is a tree 60 feet tall, with oblong, punctate leaves. The soft gray even-grained wood is used for building purposes.

For previous introduction see 58911.

93222. SWERTIA MULTICAULIS D. Don. Gentianaceae.

A blue-flowered tufted plant occurring in poor black sodden soil among scree débris (granite) at an altitude of 15,000 feet.

For previous introduction see 41603.

93223 to 93225.

From Japan. Plants purchased from the Yokohama Nursery Co. (Ltd.). Received April 27, 1931.

93223. PHYLLOSTACHYS PUBERULA (Miquel) Munro (*P. henonis* Mitf.). Poaceae. **Bamboo.**

For previous introduction and description see 92511.

93224. PHYLLOSTACHYS EDULIS HETEROCYCLA (Carr.) H. de Lehaie. Poaceae. **Tortoise-shell bamboo.**

A hardy bamboo of somewhat uncertain identity, the nodes and internodes of which have a peculiar form, suggesting, in appearance, the plates of a tortoise shell.

93225. ARUNDINARIA ANGULATA (Munro) Porterfield (*Bambusa angulata* Munro). Poaceae. **Bamboo.**

A bamboo which produces angular culms, squarish in cross section. This character does not appear, however, in culms of very small diameter. The maximum height attained is uncertain, possibly as much as 25 or 30 feet. The species has proved very difficult to propagate. Its systematic position was long in doubt, it having been erroneously placed at different times in the genera Bambusa and Phyllostachys.

93226 to 93233.

From Australia. Seeds presented by James MacRae, through R. E. Beckett, Bard, Calif. Received April 27, 1931.

93226. CASUARINA STRICTA Ait. Casuarinaceae.

This tree, commonly cultivated in California but more rare in Florida, is a fairly hardy species, making a low, often shrubby growth. It is conspicuous on account of its very thick, often pendulous branchlets and very big cones. In appearance it is not so elegant as some of the other casuarinas, but it is very striking and is also of some economic value. The branchlets are said to be a favorite forage of Australian cattle. The wood is especially valuable for shingles and posts.

For previous introduction see 67809.

93227 to 93231. EUCALYPTUS spp. Myrtaceae.

93227. EUCALYPTUS ALBA Reinw.

White gum. A tall tree with ash-colored rough persistent bark and glaucous leaves varying from ovate-oblong and 3 inches long to ovate-lanceolate and 6 inches long. The small flowers are gathered into panicles at the ends of the branches, and the top-shaped fruits are one-fourth of an inch in diameter. It is native to North Australia.

93228. EUCALYPTUS AMYGDALINA Labill. **Almond eucalyptus.**

Peppermint gum, a variety of the almond eucalyptus, is a tall Australian tree up to 300 feet high, with lanceolate leaves 4 inches long, crowded umbels of small flowers, and hemispheric fruits a quarter of an inch broad. The leaves have a strong odor of peppermint and are rich in oil.

For previous introduction see 77608.

93226 to 93233—Continued.

93229. EUCALYPTUS CAPITELLATA J. E. Smith.

Stringy bark. A large tree, native to Australia, with dark-gray, furrowed, fibrous bark and thick, shining, sword-shaped leaves 3 to 6 inches long. The small sessile flowers are in axillary clusters of 5 to 10, and the depressed-globose fruits, nearly half an inch in diameter, have a prominent reflexed rim.

93230. EUCALYPTUS MELLIODORA A. Cunn. **Honey gum.**

Yellow box gum. A spreading tree up to 150 feet high, with drooping branches, narrow lanceolate leaves 3 to 5 inches long, and small flowers particularly rich in nectar. The timber is used in Australia by wheelwrights and shipbuilders.

93231. EUCALYPTUS sp.

Ash gum.

93232. EXOCARPUS CUPRESSIFORMIS Labill. Santalaceae.

Usually a tree about 20 feet high, with very numerous, green, rigid, wiry, apparently leafless branches; the leaves are reduced to minute scales. The flowers are very small, appearing in short spikes; usually only one of these flowers is fertilized, and the small, roundish nut, borne on a red, succulent stem, is eaten by the natives. The close-grained, handsome wood is used by cabinetmakers and for tool handles. It is native throughout Australia.

For previous introduction see 56568.

93233. HAKEA SALIGNA (Andrews) Knight. Proteaceae.

An evergreen shrub, about 8 feet high, native to Australia, with oblanceolate leaves 3 to 6 inches long. The small white flowers are in dense clusters.

93234 and 93235. VITIS VINIFERA L. Vitaceae. **European grape.**

From Corsica. Cuttings presented by F. Durazzo, Sartene, through Niels Nielsen, agricultural commissioner, American consulate, Marseille, France. Received April 27, 1931.

93234. *Montanaccio.*

93235. *Sciaccarello* (*Sciuchitajolo*).

93236 and 93237.

From England. Seeds purchased from Thompson & Morgan, Ipswich. Received April 28, 1931.

93236. LIBERTIA GRANDIFLORA (R. Br.) Sweet. Iridaceae.

A densely tufted herbaceous perennial, native to New Zealand, with stiff leathery linear leaves up to 3 feet long and a flowering stem as tall as the leaves, bearing a branching panicle of white flowers each an inch broad.

For previous introduction see 77563.

93237. RUSCUS ACULEATUS L. Convallariaceae. **Butchersbroom.**

A rigid evergreen shrub, native to Europe, 2 to 4 feet high, with branching grooved stems and sessile ovate cladodes replacing the leaves. The small white flowers are borne in the axil of a bract in the middle of each cladode and are followed by ovoid red berries half an inch in diameter.

For previous introduction see 79180.

93238 and 93239. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From the Union of Soviet Socialist Republics. Seeds presented by L. P. Bordacoff, Kubanskaia, Institute of Applied Botany, North Caucasus Experiment Station, Otrada, Armavir District, through H. L. Westover, Bureau of Plant Industry. Received April 28, 1931.

93238. From the North Caucasian station of the Bureau of Applied Botany, Otrado-Kubanskaia, Asia Minor. Crop of 1929, collected in 1930.

93239. No. 14344. *Beba.* Kashgarian blue alfalfa.

93240. ALEURITES MONTANA (Lour.) Wilson. Euphorbiaceae. **Mu-oil tree.**

A tree with oil-producing nuts which is allied to the tung-oil tree. Native to southern China.

For previous introduction see 71177.

93241 and 93242. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Australia. Seeds presented by W. L. Waterhouse, University of Sydney. Received April 29, 1931.

From the New Plant Breeding Branch of the New South Wales Department of Agriculture. Introduced for the use of department specialists.

93241. *Thew.* These grains are the progeny of a single plant.

93242. *Thew.* These grains were grown on another single plant.

93243. ZEA MAYS L. Poaceae. **Corn.**

From Germany. Seeds collected by J. G. Dickson, United States Department of Agriculture. Received April 29, 1931.

Introduced for the use of department specialists who are working with corn.

93244 to 93255. HIBISCUS ROSA-SINENSIS L. Malvaceae. **Chinese hibiscus.**

From the Canal Zone. Cuttings presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received April 30, 1931.

93244. Coral.

93245. Dark red.

93246. Double orange.

93247. Large orange red.

93248. Large yellow.

93249. Orange with red centers.

93250. Pink.

93251. Pink with dark-red centers.

93252. Yellow.

93253. Yellow.

93254. Yellow with red centers.

93255. Velvet red.

93256 to 93258. TRIFOLIUM SUBTERRANEUM L. Fabaceae. **Subterranean clover.**

From Australia. Seeds presented by P. D. Forrest, of Boyup Brook, Western Australia, through A. B. Adams, Western Australia Agricultural College, Mursek. Received May 1, 1931.

An Australian clover which appears to have value as a forage plant for the southern United States.

93256. *Forrest's Extra Early.* A very early variety which is particularly suitable for dry districts, as the flowers set seed before the rains cease. The flowers do not set seed after the ground is too dry for them to bury themselves.

93257. *Late* variety. A very large variety that comes into flower approximately one month later than the *Midseason.*

93258. *Midseason.* This is the most widely grown variety in Western and South Australia.

93259 to 93261. CANNABIS SATIVA L. Moraceae. **Hemp.**

From Hungary. Seeds presented by Rudolf Fleischmann, Engineer, Kompolt Experiment Station. Received May 1, 1931.

93259. *Bácskaer Hanf.*

93260. *Fleischmann's scher veredelter Hanf.*

93261. *Veredelter Hanf der Darusziget-er Landwirtschft.*

93262 to 93270.

From Mexico and Central America. Seeds collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received May 1, 1931.

93262. COUSSAPOA REKOI Standl. Moraceae.

No. 9159. From Oaxaca, Mexico, March 19, 1931. A large Mexican tree with a spreading crown and prickly branchlets. The ovate entire leaves are 1 to 2 feet long, and the flowers, in globose pedunculate heads, are followed by succulent fruits 1 inch in diameter.

For previous introduction see 76398.

93263. DATURA DISCOLOR Bernh. Solanaceae.

From La Paz, Lower California. A low, somewhat hairy annual herb, found in Colorado, Arizona, and the southeastern part of California. It has more or less deeply toothed leaves, purplish white flowers 2 or 3 inches long, and round hairy capsules with large stout hairy prickles. The thickish seeds are dark colored with wrinkled or pitted crustaceous coats.

For previous introduction see 44129.

93264. EUCHLAENA MEXICANA Schrad. Poaceae. **Teosinte.**

From San Salvador. A coarse annual grass native to Mexico, where it was cultivated in prehistoric times. It resembles corn rather closely, and some botanists consider that corn is a hybrid of which teosinte is one of the parents.

For previous introduction see 41905.

93262 to 93270—Continued.

93265. MAMMILLARIA sp. Cactaceae. **Cactus.**

No. 9175. From La Paz, Lower California.

93266. MAXIMILIANEA VITIFOLIA (Willd.) Krug and Urb. (*Cochlospermum hibiscoides* Kunth.). Cochlospermaceae.

No. 9162. Collected at Acapulco, Mexico, March 21, 1931. A deciduous tree, native to Central America, about 35 feet high, but flowering when only 5 feet high. The alternate leaves have five to seven serrate lobes, and the handsome bright-yellow flowers, 4 inches across, are in terminal clusters.

For previous introduction see 81268.

93267. SENECIO sp. Asteraceae.

From Puerto Barrios, Guatemala.

93268. (Undetermined.)

No. 9170. From La Paz, Lower California, March 30, 1931.

93269. (Undetermined.)

No. 9174. From La Paz, Lower California, March 30, 1931. A small tree used for making furniture.

93270. ACANTHORHIZA sp. Phoenicaceae. **Palm.**

No. 9191. From Concordia, Oaxaca, Mexico.

93271 to 93273. FICUS spp. Moraceae. **Fig.**

From Egypt. Cuttings presented by Thomas W. Brown, director, horticultural section, Ministry of Agriculture, Cairo. Received May 1, 1931.

93271. FICUS ERIOBOTRYOIDES Kunth and Bouché.

A tree with straight branches, brown pubescent branchlets, and oblong-ovate, coriaceous leaves 1 foot long and 3 to 4 inches wide. The native country is not known.

93272. FICUS ALTISSIMA Blume (*F. laccifera* Roxb.). **Lofty fig.**

A large spreading tree, native to the tropical Himalayas. It is said to yield as good caoutchouc as its relative, *Ficus elastica.*

For previous introduction see 82398.

93273. FICUS NYMPHAEAEFOLIA Mill.

A tropical American tree with erect branches and long-petioled, broadly heart-shaped leaves 8 inches long, resembling those of a waterlily. The sessile, globular, pubescent fruits are in axillary pairs.

93274. GENTIANA LUTEA L. Gentianaceae. **Yellow gentian.**

From Paris, France. Seeds presented by Vilmorin-Andrieux & Co., through Dr. Raymond M. Hann, National Institute of Health, Public Health Service, Washington, D. C. Received May 4, 1931.

A coarse perennial species, too large for the rock garden, with 3-foot to 4-foot stems bearing handsome rugose foliage, crowned in late summer in the upper whorls of leaves with crowded clusters of slender-lobed, golden-yellow flowers.

For previous introduction see 78932.

93275 to 93278. FICUS CARICA L. Moraceae. **Common fig.**

From England. Rooted cuttings purchased from George Bunyard & Co., the Royal Nurseries, Maidstone. Received May 4, 1931.

93275. *Brown Turkey.* A midseason variety which is medium long, deep brownish purple with a light bloom, and red flesh. It is very delicious, extremely fertile, and the best for main crop in or out of doors.

93276. *Brunswick.* An enormous, pear-shaped, midseason variety, pale green with a brownish-purple flush, and delicious white flesh with slight tinge of red at the center. It is very hardy, ripens after *Brown turkey,* and is the largest for outside culture. This variety has been grown in England for 200 years.

93277. *Negro Largo* (the *San Pietro* of Italy). This enormous pear-shaped jet-black fig is the second early in time of ripening and has pale-red flesh, most tender and delicious. It is a free bearer, but not hardy enough for outside culture in England.

93278. *Osborne's Prolific.* A roundish dark-brown fig which ripens early and is extremely prolific. The pale-yellow flesh has a rich sweet flavor.

93279. PHLEBOTAENIA COWELLII Britton. Polygalaceae. **Violet tree.**

From Puerto Rico. Seeds presented by H. T. Cowles, College of Agriculture and Mechanic Arts, University of Puerto Rico, Mayaguez. Received May 4, 1931.

A beautiful deciduous tree about 20 feet high, with elliptic to obovate leathery leaves and violet-purple flowers half an inch long, in 4-flowered to 10-flowered racemes, appearing in February before the leaves. It is native to Puerto Rico.

93280. CYRTOSTACHYS RENDA Blume. Phoenicaceae. **Palm.**

From Sumatra. Seeds presented by J. A. Lözing, Plantentuin Sibolangit, Sibolangit, Medan. Received July 7, 1928. Numbered in May, 1931.

A Sumatran palm of stately habit, about 25 feet high, with a slender spineless trunk crowned by a graceful cluster of pinnately divided leaves with bright-red leaf sheaths.

For previous introduction see 68116.

93281. CHAMAEDOREA TEPEJILOTE Liebm. Phoenicaceae. **Palm.**

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received March 3, 1930. Numbered in May, 1931.

A palm, native to Mexico, up to 10 feet high, with pinnate leaves about 4 feet long. The undeveloped inflorescence is eaten as a vegetable.

For previous introduction see 80881.

93282. GARCINIA sp. Clusiaceae.

From Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, division de botanique, Annam. Received March 25, 1930. Numbered in April, 1931.

Possibly of value as a stock for the mangosteen.

93283 to 93289. AVENA spp. Poaceae. **Oats.**

From Germany. Seeds presented by Dr. William Nicolaisen, University of Halle, Halle-Saale. Received May 5, 1931.

A collection of oat varieties which have shown resistance to loose smut of oats under conditions in Germany. Introduced for the use of department specialists.

93283. AVENA BYZANTINA Koch.

No. 30. *Algerian.*

For previous introduction see 80219.

93284 to 93289. AVENA SATIVA L.

93284. No. 101. *Black mesdago.*

93285. No. 104. *Champion a kadmae.*

93286. No. 36. *Kelsalls.*

93287. No. 110. *Monarch.*

93288. No. 33. *Reid.*

93289. No. 39. *Warrigal.*

93290 and 93291.

From the Union of South Africa. Seeds presented by I. B. Pole Evans, chief, division of plant industry, Department of Agriculture, Pretoria. Received May 6, 1931.

93290. HELIOPHILA SUAVISSIMA Burch. Brassicaceae.

A subshrubby perennial, 1 to 2 feet high, branched at the base, with wandlike branches, leafy in the lower part. The linear, awl-shaped leaves are 1 to 2 inches long, and the rather large, fragrant, violet or purple flowers are borne in racemes 6 inches long. It is native to southern Africa.

93291. PHYMASPERMUM PARVIFOLIUM (DC.) Benth. and Hook. Asteraceae.

A rigid, much-branched shrub, 1 to 2 feet high, with thinly silky, tufted, linear leaves 1 inch long or less, and chrysanthemumlike flowers having reddish or yellow disk flowers and white rays. It is native to southern Africa, where it is said to make a valuable pasture for merino sheep.

93292 to 93297. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Hawaii. Cuttings presented by W. T. Pope, Senior Horticulturist, Agricultural Experiment Station, Honolulu. Received May 6, 1931.

93292. *Holt.*

93293. *Jemshedi* or *Jamshedi.*

93294. *McDougall.*

93295. *Mulgoa.*

93296. *Whelan.*

93297. *Whitney.*

93298. ACHRAS ZAPOTA L. Sapotaceae. **Sapodilla.**

From Java. Seeds presented by the Tuinbouwkundig Ambtenaar, Pasar Minggoe. Received March 19, 1930. Numbered in May, 1931.

A small symmetrical tree, 25 to 30 feet high, with shiny dark-green leathery leaves and round or oblong, fleshy fruits resembling in outward appearance a smooth-skinned brown potato. It is native to

93298—Continued.

tropical America, although it is now cultivated in the Asiatic Tropics as well. When thoroughly ripe the fruit is fine for eating, a very thin skin inclosing a pale-brown, juicy pulp of delicious flavor. The bark contains a milky latex known commercially as chicle. It is best propagated from cuttings, although it may also be raised from seed.

For previous introduction see 45907.

93299 to 93305.

From Chihli Province, China. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 6, 1931.

93299 and 93300. BETA VULGARIS L. Chenopodiaceae. **Beet.**

From Haitien, about 6 miles from Peiping, March 8, 1931. Probably Chinese varieties.

93299. No. 6909. A green beet.

93300. No. 6910. A purple beet.

93301. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

No. 4619. From W. J. Simpson, Methodist Episcopal Mission, Changli, March 12, 1931. Said to be a Chinese variety.

93302. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 6920. *Chang li.* A small yellow pear-shaped fruit presented by W. J. Simpson, Methodist Episcopal Mission, Changli, March 12, 1931.

93303. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

No. 6912. A red garden bean from Haitien, about 6 miles west of Peiping.

93304. PISUM SATIVUM L. Fabaceae. **Pea.**

No. 6911. From Haiten, about 6 miles west of Peiping, March 8, 1931. Probably a Chinese variety.

93305. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

No. 6918. From Changli, March 12, 1931. A native variety.

93306. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Pasar Minggoe, Java. Plants received from the Tuinbouwkundig Ambtenaar September 12, 1930. Numbered in May, 1931.

Gadoeng grafted on *Madoe.*

93307. FRAGARIA sp. Rosaceae. **Strawberry.**

From Germany. Plants purchased from Nonne & Hoepker, Ahrensburg, Hamburg. Received May 7, 1931.

Upper Schlesian.

93308 and 93309.

From Sweden. Seeds presented by Robert E. Fries, Stockholm Botanic Garden. Received May 7, 1931.

Collected in Kansu Province, western China, during the Swedish Hedin expedition, February, 1930.

93308 and 93309—Continued.

93308. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. Papaveraceae. **Yellow Chinese-poppy.**

A fine alpine plant over 2 feet high, found rather commonly at altitudes of 14,000 to 15,000 feet among limestone boulders. The leaves are linear, with the basal ones forming a rosette, and are covered with red hairs. The large bright-yellow flowers are 4 inches across.

For previous introduction see 84011.

93309. MECONOPSIS PUNICEA Maxim. Papaveraceae. **Chinese-poppy.**

A stemless annual with a rosette of ovate-lanceolate leaves and scapes 16 to to 20 inches high, bearing pendulous dark-pink flowers with four or more petals each 4 inches long and 2 to 3 inches across. It is native to western China and Tibet.

93310 to 93314. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From British Guiana. Suckers presented by F. Burnett, acting director, Department of Agriculture, Georgetown, Demerara. Received May 7, 1931.

93310. *Chocoma.*

93311. *Mainpouri.*

93312. *White Montserrat.*

93313. *Red Spanish.*

93314. *Sugar Loaf.*

93315 to 93326.

From Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Gardens, Peradeniya. Received May 7, 1931.

93315. ALSTONIA MACROPHYLLA Wall. Apocynaceae.

A tall Malayan evergreen tree with milky juice, oblanceolate leaves 1 foot long, and terminal clusters of small white flowers.

For previous introduction see 79972.

93316. AMOMUM HEMISPHAERICUM (Blume) Schum. Zinziberaceae.

A very striking and handsome species from Java, with great pinnate leaves rising from the ground to a height of 12 feet, which have leaflets 2 feet long. The under surface of the leaflets is a lovely bronze claret color, making the plant, when seen against the sunlight, a wonderfully beautiful thing. It is propagated usually by rhizome cuttings.

For previous introduction see 66196.

93317. ARECA TRIANDRA Roxb. Phoenicaceae. **Palm.**

A graceful and spineless palm, ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of olives, are orange scarlet. It is native to India.

For previous introduction see 88864.

93318. BORASSUS FLABELLIFER L. Phoenicaceae. **Palmyra palm.**

A handsome though slow-growing palm found on the dry coastal regions of Ceylon, where it is apparently able to withstand any amount of lime and is said to have been used successfully as a binder for sand dunes. In the number

93315 to 93326—Continued.

of ways in which this palm is used in Ceylon, it rivals the coconut. A delicate sugar is made from the sap which flows in abundance from its inflorescence when cut. The seeds are germinated and the young subterranean hypocotyl used as a vegetable. The leaves are used in many different ways. The fruit, half the size of a coconut, is very attractive in appearance, and when ripe exhales a delicate fragrance. The hull also is eaten by the Tamils of Ceylon.

For previous introduction see 88611.

93319. CALYPTROCALYX SPICATUS (Lam.) Blume. Phoenicaceae. **Palm.**

A graceful palm 30 to 40 feet high with pinnate leaves and slender spikes of red fruits.

For previous introduction see 69001.

93320. ERYTHRINA VARIEGATA ORIENTALIS (L.) Merr. (*L. lithosperma* Blume). Fabaceae. **Dadap.**

A moderate-sized spineless leguminous tree native to the East Indies. It is of very rapid growth, with trifoliolate leaves and red flowers. In Ceylon the tree is used, as a shade tree for crop plants, and also, the foliage is lopped for use as green manure. It is being tested as a cover plant at the experiment station in Peradeniya.

For previous introduction see 81923.

93321. LICUALA GRACILIS Blume. Phoenicaceae. **Palm.**

A fan palm, 5 to 7 feet high, native to Java, with the stems growing in clusters. The orbicular, plicate leaves are deeply cut into cuneate segments, and the petioles are spiny along the edge.

For previous introduction see 88672.

93322. LICUALA SPINOSA Thunb. Phoenicaceae. **Palm.**

A dwarf fan-leaved palm, native to the East Indies, 10 to 12 feet high, with roundish leaves 3 feet or more in diameter and 3-angled petioles armed with brownish hooked spines. It requires abundant heat and moisture.

For previous introduction see 88673.

93323 to 93325. PHOENIX spp. Phoenicaceae.

93323. PHOENIX PUSILLA Gaertn. (*P. farinifera* Roxb.). **Date palm.**

A dwarf palm about 4 feet high, with pinnate leaves having spiny petioles and dark-green, sword-shaped leaflets and black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see 88676.

93324. PHOENIX CANARIENSIS Chabaud (*P. tenuis* Versch.). **Canary date palm.**

A palm, native to the Canary Islands, closely resembling the common date palm (*Phoenix dactylifera*), but more slender and graceful in all its parts, and the leaves are more numerous.

93325. PHOENIX ZEYLANICA Trimen. **Ceylon date palm.**

A pinnate-leaved palm, native to Ceylon, with a stem 8 to 20 feet high and a crown of rather short leaves made up of numerous linear-lanceolate, light-green leaflets 7 to 10 inches long. The obovoid-oblong, violet-blue, edible fruits are half an inch long.

93326. PTYCHOSPERMA ANGUSTIFOLIA Blume. Phoenicaceae. **Palm.**

A tropical Australian pinnate palm which grows in great clumps. When young it is suited for pot culture, but should be tried out in the open in southern Florida in private gardens. The small, slender stems make it especially adapted to small gardens.

For previous introduction see 88677.

93327 to 93335.

From Japan. Plants presented by the director, Imperial Horticultural Experiment Station, Okitsu. Received May 7, 1931.

93327 to 93334. CITRUS NOBILIS UNSHIU Swingle. Rutaceae. **Satsuma orange.**

93327. *Bito-Wase.*

93328. *Fujii-Wase.*

93329. *Higuchi-Wase.*

93330. *Osugi-Wase.*

93331. *Sueoka-Wase.*

93332. *Suzuki-Wase.*

93333. *Ueno-Wase.*

93334. *Yakushiji-Wase.*

93335. MYRICA RUBRA Sieb. and Zucc. Myricaceae.

A handsome tree about 20 feet high, with dark-green glossy foliage. The globular fruits are quite acid, and, owing to their fragility and peculiar structure, they do not ship well. The fruits are salted and dried, because the fresh fruits are too soft to appeal to the Chinese palate.

For previous introduction see 70974.

93336. TALAUMA MEXICANA (DC.) Don. Magnoliaceae.

From Zacuapam, Huatusco, Vera Cruz, Mexico. Seeds presented by Dr. C. A. Purpus. Received May 8, 1931.

A large tree up to 90 feet high, with persistent, oval leaves 10 inches long and large, white, sweet-scented flowers.

93337 to 93339.

From Spain. Seeds presented by P. Patay, Seville, through S. F. Morse, Morse Agricultural Service, Malaga. Received May 8, 1931.

93337. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

Trijo roji. A red winter wheat which is grown as a dry-land crop near Seville. It yields about 1,000 pounds of grain per acre and produces a good quality of flour.

93338 and 93339. VICIA FABA L. Fabaceae. **Broadbean.**

93340. PSIDIUM GUAJAVA L. Myrtaceae. **Guava.**

From Java. Seeds presented by the Tuinbouwkundig Ambtenaar, Pasar Minggoe.

93340—Continued.

Received March 19, 1930. Numbered in May, 1931.

Djamboe bidji.

93341 to 93347. FICUS CARICA L. Moraceae. **Common fig.**

From Palestine. Cuttings presented by A. Grasovsky, inspector of agriculture, Jerusalem. Received March 27, 1928. Numbered in May, 1931.

Introduced for the use of specialists working with figs.

93341. *Biyadi.*

93342. *Haroubi.*

93343. *Hedari.*

93344. *Moazi.*

93345. *Molessi.*

93346. *Sounari.*

93347. *Swadi.*

93348 to 93350. FICUS CARICA L. Moraceae. **Common fig.**

From Palestine. Cuttings presented by Amram Khazanoff, Jewish Colonization Association, Haifa. Received April 30, 1928. Numbered in May, 1931.

Introduced for the use of specialists working with figs.

93348. *Khedari* (the greenish).

93349. *Khurtmani* (the carob-tasting).

93350. *Sultani* (the Sultan's own).

93351. PERSEA AMERICANA Mill. Lauraceae. **Avocado.**

From Mexico. Seeds collected by G. N. Collins and J. H. Kempton, with the Allison V. Armour expedition to Mexico and the West Indies, 1931. Received May 11, 1931.

No. 9199. Collected at 6,000 feet altitude at a cafetal near Concordia, Oaxaca.

93352 to 93357. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From the Union of Soviet Socialist Republics. Seeds presented by the Bureau of Introduction, Leningrad. Received May 12, 1931.

93352. A family selection from a cross of dial method, $T_2 \frac{N\ 3}{H\ 20}$ from Esthonia.

93353. From the Government of Leningrad. A family selection from $T_2\ N \frac{8}{59-3-20}$

93354. A family selection from a cross of dial method, $T_2 N \frac{10}{3.2}$ from the Station Livoricu.

93355. A family selection from a cross of dial method, $T_2 N \frac{10}{1.2.10}$ from the Station Livoricu.

93356. A family selection from $T_2N \frac{41}{20-4-20}$ from Lifland.

93357. A family selection from a cross of dial method, $T_2 N \frac{42}{7.14}$ from Lifland.

93358 to 93364.

From Colombia. Seeds presented by Eduardo Hernandez, Department of Caldas, Pijao. Received May 12, 1931.

93358. CARYOPHYLLUS JAMBOS (L.) Stokes (*Eugenia jambos* L.). Myrtaceae. **Rose apple.**

Pomarrosa. A medium-sized, handsome tree, native to India and the Malay Peninsula, but cultivated in many tropical countries for the edible, fragrant, pinkish fruits which are about the size of a hen's egg, of a sweetish acid taste, and said to be used as preserves. It thrives best in moist regions at elevations up to 3,000 feet, preferring a deep rich soil, and is propagated by seed.

For previous introduction see 44891.

93359. GUILIELMA GASIPAES (H. B. K.) Bailey (*G. speciosa* Mart.). Phoenicaceae. **Pupunha.**

An Amazonian palm which becomes 60 feet high and is closely related to the pejibaye (*Guilielma utilis*). Like the pejibaye, it furnishes food for great numbers of people in regions where it is indigenous and appears to be of promise for cultivating as a food plant throughout the Tropics in congenial situations.

For previous introduction see 87383.

93360 to 93362. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

93360. *Cargamanto.*

93361. *Radical.*

93362. *Sangre de Toro.*

93363. RHEEDIA MADRUNO (H. B. K.) Planch. and Triana. Clusiaceae.

A handsome pyramidal tree, 35 feet high, found between 3,000 and 4,000 feet altitude. The dark-green, elliptic leaves are about 6 inches long. The fruits are about the size of a small lemon and the same color, with thick leathery, very rough skin and whitish translucent flesh of aromatic, subacid taste. The two or three rather large seeds are oblong.

For previous introduction see 52301.

93364. SAMANEA SAMAN (Jacq.) Merr. (*Pithecollobium saman* Benth.). Mimosaceae.

A large spreading tree up to 60 feet high, native to Central America, but widely distributed throughout the Tropics as an ornamental shade tree; the horizontal branches are extremely long. The wood is not very hard, but the heartwood is a handsome red color and takes on a fine polish. The pods are eagerly eaten by cattle.

For previous introduction see 51455.

93365. LAPAGERIA ROSEA ALBIFLORA Hook. Liliaceae. **White Chile-bells.**

From England. Plants purchased from Robert Veitch & Sons (Ltd.), Exeter. Received October 17, 1930. Numbered in May, 1931.

A form in which the flowers are cream colored with a tinge of rose at the base; purchased for a special experiment.

For previous introduction see 88323.

93366 to 93387.

From China. Plants presented by G. Weidmann Groff, Lingnan University, Canton. Received May 13, 1931.

93366. ATALANTIA sp. Rutaceae.

No. 168. A tree form from Saigon, French Indo-China.

93367 to 93386. CITRUS spp. Rutaceae.

Nos. 93367 to 93376 are varieties grafted on Australian lemon.

93367 and 93368. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). **Grapefruit.**

93367. No. 107. *Song ma yau.*

93368. No. 142–a. *Kwong sai sha t'in yau.*

93369 and 93370. CITRUS NOBILIS Lour. **King orange.**

93369. No. 96. *Sz ooi kom,* a fine variety from Lokongtung.

93370. No. 227. *Sz ooi kom.* An excellent variety from the Lingnan University gardens.

93371 to 93375. CITRUS SINENSIS (L.) Osbeck. **Orange.**

93371. No. 106. *Heung shui chang.*

93372. No. 223. *Heung shui chang,* from the Lingnan University gardens.

93373. No. 153. *Laan fa ip chang,* from Towah.

93374. No. 165. *Laan fa ip chang,* from Towah.

93375. No. 224. *Ming lau chang,* from the Lingnan University gardens.

93376. CITRUS sp.

No. 109. *Chu sha kat,* vermilion kat, from Fatei.

93377. CITRUS sp.

No. 208. *Hung ling mung,* red ling mung, from Paakshan.

93378. CITRUS sp.

No. 213. *Hung ling mung,* red ling mung, from Towah.

93379. CITRUS sp.

No. 183. *Paak ling mung,* white ling mung, from Paakshan; grafted on Australian lemon.

93380. CITRUS sp.

No. 155. *Paak ling mung,* white ling mung, from Towah; budded on Australian lemon.

93381. CITRUS sp.

No. 45. *Chiu chau suen kat,* Chiuchow sour kat, from Chiuchow (Swatow area).

Nos. 93382 to 93386 were grafted on Australian lemon.

93382. CITRUS sp.

No. 69. *Taai hung kat,* large red kat, from Kootsun, Heungshan.

93383. CITRUS sp.

No. 95. *Taai hung taap kat.*

93366 to 93387—Continued.

93384. CITRUS sp.

No. 229. *Taap kat,* from the Lingnan University gardens.

93385. CITRUS sp.

No. 228. *Tong hung kat,* from the Lingnan University gardens.

93386. CITRUS sp.

No. 226. *Toi toi kwoh,* from the Lingnan University gardens.

93387. CLAUCENA LANSIUM (Lour.) Skeels (*C. wampi* Oliver). Rutaceae. **Wampi.**

No. 209. *Yat laap tuk wat,* inarched on sour Wongpei.

For previous introduction see 74212.

93388. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From the Canal Zone. Scions presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received May 11, 1931.

Variety *Fairchild.*

93389 to 93393.

From China. Seeds purchased from J. W. Dyson, director, College of Arts and Sciences, Soochow University, Soochow, through P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received May 14, 1931.

Commercial varieties introduced for the use of department specialists.

93389 to 93391. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

93392. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

93393. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

93394 to 93396. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Tahiti. Society Islands. Bud wood presented by Harrison W. Smith, Papeari. Received May 16, 1931.

93394. *Bougico* or *Brander.*

93395. *Mission.* This is considered the best variety on the island.

93396. *Tutehau.* An excellent variety which comes true from seed.

93397 and 93398. FICUS spp. Moraceae. **Fig.**

From India. Seeds presented by P. A. Dain, superintendent, Ganeshkhind Botanical Gardens, Kirkee, district of Poona. Received May 18, 1931.

93397. FICUS GLOMERATA Roxb.

A large tree with membranous, obovate to oblanceolate leaves 7 inches long and edible red fruits more than 1 inch in diameter. It is native to India and Ceylon.

For previous introduction see 52496.

93398. FICUS TSIELA Roxb.

For previous introduction and description see 92954.

93399 to 93418. Phoenicaceae. **Palm.**

From Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Gardens, Peradeniya. Received May 18, 1931.

93399. ACROCOMIA SCLEROCARPA Mart. **Macauba palm.**

A graceful spiny tropical American palm, 30 to 40 feet high, with a terminal cluster of narrow, pinnate leaves. When mature, the inside of the trunk furnishes excellent starch, equal in quality to that of the cassava plant. The leaves yield strong fiber, utilized by the natives of Paraguay for making hammocks. From the yellowish fruits, about an inch in diameter, an excellent edible oil is expressed.

For previous introduction see 86520.

93400. ARECA TRIANDRA Roxb.

A graceful spineless palm; ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of olives, are orange scarlet. Native to India.

For previous introduction see 88864.

93401. CALYPTROCALYX SPICATUS (Lam.) Blume.

For previous introduction and description see 93319.

93402. CARYOTA MITIS Lour.

A palm, native to the Malay Peninsula, 15 to 20 feet high, which sends out suckers from the base. The pinnate leaves, 6 to 9 feet long, are divided into wedge-shaped segments, and the globular purple fruits are about the size of a cherry.

For previous introduction see 80179.

93403. CARYOTA PLUMOSA Hort.

A form of fishtail palm with leaves resembling those of *Caryota mitis* and *C. urens*.

For previous introduction see 75750.

93404. CARYOTA MITIS Lour.

Received as *C. sobolifera*, which is now generally considered to be the same as *C. mitis*.

For previous introduction and description see 93402.

93405. ARECASTRUM ROMANZOFFIANUM (Cham.) Becc. (*Cocos plumosa* Hook. f.).

A palm, native to Brazil, with an unarmed trunk about 30 feet high and a foot in diameter, bearing a crown of plumelike, pinnate leaves 12 to 15 feet long. The fruit is a pale-orange drupe about the size of a large acorn, inclosing a bony seed which has three eyes near the base.

For previous introduction see 81687.

93406. CYRTOSTACHYS RENDA Blume.

A Sumatran palm of stately habit, about 25 feet high, with a slender spineless trunk crowned by a graceful cluster of pinnately divided leaves with bright-red leaf sheaths.

For previous introduction see 68116.

93407. LINOMA ALBA (Bory) O. F. Cook (*Dictyosperma aureum* Wendl. and Drude).

93399 to 93418—Continued.

A form of this well-known, arecalike palm with yellow or orange petioles and veins on the leaves of the young plants. It reaches a height of about 30 feet, and the pinnate leaves are 4 to 8 feet long. It is native to tropical Asia.

93408. CHRYSALIDOCARPUS MADAGASCARIENSIS Beccari (*Dypsis madagascariensis* Hort.).

A graceful palm, native to Madagascar, about 15 feet high, with pinnate leaves 10 feet long, having the segments arranged in fascicles and appearing to be in threes, giving a triangular effect.

For previous introduction see 81511.

93409. HETEROSPATHE ELATA Scheff.

A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations and where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house plant.

For previous introduction see 89203.

93410. SEAFORTHIA ELEGANS R. Br.

A palm up to 30 feet in height, native to the southern coast of Australia and the neighboring islands. The dark-green pinnate fronds are 15 feet long, and the small fruits are oval and very fibrous.

For previous introduction see 51738.

93411. LICUALA SPINOSA Thunb.

For previous introduction and description see 93322.

93412. LIVISTONA CHINENSIS (Jacq.) R. Br. **Chinese fan palm.**

A palm, native to China, with a short thick trunk up to 6 feet high and a foot thick, having a crown of reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch long.

For previous introduction see 85742.

93413. LIVISTONA ROTUNDIFOLIA (Lam.) Mart. **Java fan palm.**

An erect pinnate-leaved palm, native to tropical Asia, about the same size as the coconut palm. The hard durable wood is used for general construction.

For previous introduction see 72599.

93414. LIVISTONA SUBGLOBOSA (Hassk.) Mart.

A medium-sized palm, native to Java, with palmately divided leaves having segments 10 to 12 inches long which are two parted nearly to the base into linear, pendulous lobes. The blackish-violet fruits, half an inch in diameter, are borne in a panicle on a spadix about a foot long.

For previous introduction see 45589.

93415. PHOENIX PUSILLA Gaertn. (*P. farinifera* Roxb.). **Date palm.**

For previous introduction and description see 93323.

93416. PTYCHOSPERMA ANGUSTIFOLIA Blume.

For previous introduction and description see 93326.

93399 to 93418—Continued.

93417. PTYCHOSPERMA MACARTHURI Wendl.

A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation and suckers from the base making a bushy plant. The smooth ringed trunk is crowned by a dense cluster of pinnate leaves with arching leaflets 6 to 9 inches long.

For previous introduction see 80190.

93418. WALLICHIA CARYOTOIDES Roxb.

A pinnate-leaved palm, native to India, with clustered, branching stems. The compound leaves, 8 to 10 feet long, are made up of linear-oblong leaflets 1 to 2 feet long, having fiddle-shaped lobes on the margins. The small yellow or purple flowers are borne on a spadix about 18 inches long and are followed by red or purple ovoid fruits an inch long.

93419. PINUS KORAIENSIS Sieb. and Zucc. Pinaceae. **Korean pine.**

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Applied Botany, Leningrad. Received May 19, 1931.

A 5-needle pine, up to 100 feet high. It produces valuable lumber and edible seeds and is also of ornamental value, being slow of growth and forming a dense broad pyramidal head with handsome foliage. It is native to Japan.

For previous introduction see 82483.

93420 and 93421.

From Argentina. Seeds presented by Enrique C. Clos, Ingeniero Agrónomo, Ministerio de Agricultura, Buenos Aires. Received May 19, 1931.

93420. CASSIA BICAPSULARIS L. Caesalpiniaceae.

A tropical American evergreen shrub 4 feet high, with pinnate leaves and yellow flowers.

For previous introduction see 74577.

93421. CASSIA CORYMBOSA Lam. Caesalpiniaceae. **Flowery senna.**

A very handsome shrub, native to Argentina, which attains a height of from 4 to 10 feet. The leaves are composed of three pairs of leaflets. In the spring the branches are clothed with numerous corymbs of bright yellow flowers. This is one of the best known garden species, being an excellent conservatory plant for spring, summer, and autumn bloom.

For previous introduction see 43648.

93422. PANDANUS UTILIS Bory. Pandanaceae. **Common screwpine.**

From Cuba. Seeds presented by Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received May 21, 1931.

A treelike plant, reaching a height of 60 feet in Madagascar where it is native. The branches of the trunk bear crowns of erect, glaucous, linear-lanceolate leaves 1 to 3 feet long, having red spines on the margins. The leaves are used in the Tropics for making bags, baskets, mats, and other articles.

93423 to 93432.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches

93423 to 93432—Continued.

Agronomiques de l'Indochine, Division de Botanique, Tonking. Received May 22, 1931.

93423. ANNONA sp. Annonaceae.

93424. BAUHINIA RETICULATA DC. Caesalpiniaceae.

A small tree, 25 feet high, which grows in dry lateritic soil and can endure long periods of drought. The rather small flowers are in compound racemes not much longer than the leaves, and are followed by abundant pods which fall to the ground in March, at the beginning of the dry season. Cattle are very fond of these pods.

93425. CARYOTA sp. Phoenicaceae. **Palm.**

93426. CASSIA NODOSA Buch.-Ham.

Pink and white shower. A moderate-sized, deciduous tree with long, drooping branches and glossy leaves; during May and June it bears a profusion of beautiful, bright-pink, rose-scented flowers borne in dense clusters on long stalks. It is native from the eastern Himalayas to the Malay Archipelago and the Philippines.

For previous introduction see 65732.

93427. CHRYSOPHYLLUM sp. Sapotaceae.

A large tree with pink flowers, collected in the arboretum of Trang Bôm, May 4, 1931.

93428. DIOSPYROS sp. Diospyraceae.

From the arboretum of Trang Bôm, May 4, 1931.

93429. ORMOSIA sp. Fabaceae.

93430. ROLLINIA sp. Annonaceae.

93431. SABAL sp. Phoenicaceae. **Palm.**

93432. UVARIA sp. Annonaceae.

93433 to 93435.

From British Honduras. Seeds presented through H. H. Bartlett, director, department of botany, University of Michigan, Ann Arbor. Received June 1, 1931.

93433. CHAMAEDOREA sp. Phoenicaceae. **Palm.**

From El Cayo, British Honduras. A small pinnate-leaved palm which fruits abundantly when the plant is 2 feet tall. The leaf segments are narrow and the fruits are blue-black. To be tried as a house plant.

93434. PLECTIS OWENIANA O. F. Cook. Phoenicaceae. **Palm.**

No. 11834. *Mountain cabbage* palm, from the mountains of Pine Ridge, Cayo district. A tall slender palm up to 75 feet high with a trunk diameter of 15 inches. The pinnate leaves, 12 feet long, are made up of numerous narrowly linear, horizontal or drooping leaflets. It is native to Guatemala and Honduras.

93435. ORMOSIA sp. Fabaceae. **Necklacebean tree.**

No. 11775. Pine Ridge Mountains, An ornamental tree whose red and black seeds hang from the open pods. The wood is fine grained and a beautiful orange-yellow in color.

93436 to 93466.

From China. Seeds purchased through Peter Liu, Peiping. Received May 22, 1931.

Commercial varieties, collected in Harbin in March, 1931, and introduced for the use of department specialists.

93436 to 93450. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

Chinese sweet melons.

93436. No. 1. **93444.** No. 9.
93437. No. 2. **93445.** No. 11.
93438. No. 3. **93446.** No. 12.
93439. No. 4. **93447.** No. 13.
93440. No. 5. **93448.** No. 14.
93441. No. 6. **93449.** No. 15.
93442. No. 7. **93450.** No. 16.
93443. No. 8.

93451 to 93458. CUCURBITA spp. Cucurbitaceae.

93451 to 93454. CUCURBITA MAXIMA Duchesne. **Squash.**

93455 and 93456. CUCURBITA MOSCHATA Duchesne. **Cushaw.**

93457 and 93458. CUCURBITA PEPO L. **Pumpkin.**

93459. LUFFA CYLINDRICA (L.) Roemer. (*L. aegyptiaca* Mill.). Cucurbitaceae. **Suakwa towelgourd.**

A smooth variety.

93460 and 93461. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

93460. No. 1. **93461.** No. 2.

93462 to 93465. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

93462. No. 1. **93464.** No. 3.
93463. No. 2. **93465.** No. 4.

93466. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

93467. CASSIA BICAPSULARIS L. Caesalpiniaceae.

From Egypt. Seeds presented by Thomas W. Brown, director, horticultural section, Ministry of Agriculture, Cairo. Received May 23, 1931.

A tropical American everygreen shrub 4 feet high, with pinnate leaves and yellow flowers.

For previous introduction see 74577.

93468 to 93473. VITIS VINIFERA L. Vitaceae. **European grape.**

From India. Cuttings purchased from the Quetta Fruit Agency, Quetta. Received March 30, 1931. Numbered in May, 1931.

93474. DIOSPYROS sp. Diospyraceae.

From Africa. Seeds presented by Dr. W. L. Thompson, Mount Silinda, Southern Rhodesia. Received May 27, 1931.

A shrub related to the persimmon, which bears a fruit about the size and somewhat the appearance of a red cherry.

93475 to 93481.

From China. Seeds purchased through S. D. Hsiao, department of biology, Central China College, Wuchang. Received May 27, 1931.

A collection of commercial varieties, introduced for the use of department specialists.

93475. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Waxgourd.**

Tung-kua.

93476 to 93478. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

Hsi-kua.

93479. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

Huang-kua.

93480. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

Nan-kua.

93481. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

Bo-tsai.

93482. KOKIA DRYNARIOIDES (Seem.) Lewton. Malvaceae.

From Hawaii. Seeds presented by C. S. Judd, Hawaiian forester, through D. T. Fullaway, Honolulu. Received May 27, 1931.

An ornamental tree with long-stemmed, heart-shaped leaves and red, silky flowers. It is native to the Hawaiian Islands, but has become practically extinct because of the ravages of cattle, sheep, and goats that eat the bark and leaves.

For previous introduction see 80267.

93483. CEDRUS LIBANOTICA Link. Pinaceae. **Cedar of Lebanon.**

From Turkey. Seeds presented by Henry E. Pears, Istanbul. Received May 28, 1931.

Taurus. A fine elegant type.

93484 and 93485. ZEA MAYS L. Poaceae. **Corn.**

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received May 28, 1931.

Introduced for the use of department specialists.

93484. White. **93485.** Red.

93486 to 93489.

From Africa. Seeds presented by Ernestina Fenzi, Tripoli, Libya. Received June 1, 1931.

93486. CHRYSANTHEMUM sp. Asteraceae.

An everblooming, woody perennial with silvery gray-green leaves and large, bright, lemon-yellow, daisylike flowers. It grows wild in gravelly soils and should make a good border plant, as it is very compact and is from 6 to 8 inches high.

93487. GENISTA MONOSPERMA (L.) Lam. Fabaceae. **Bridal-veil broom.**

A tall spreading bush, covered with white fragrant flowers in late winter and early spring. It is used as a sand binder.

93486 to 93489—Continued.

93488. PANCRATIUM MARITIMUM L. Amaryllidaceae.

A bulbous perennial with evergreen leaves and large, fragrant, white flowers which appear all through the winter.

For previous introduction see 65030.

93489. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Mech-mech. A small, round subacid variety about an inch long. In Tripoli it ripens at the end of April.

93490. SYRINGA sp. Oleaceae. **Lilac.**

From France. Seeds presented by Vilmorin, Andrieux & Co., Verrières-le-Buisson, Seine-et-Oise. Received May 1, 1931.

No. 2117 Hers.

93491. EUGENIA UNIFLORA L. (*E. brasiliana* Aubl.). Myrtaceae. **Pitanga.**

From Funchal, Madeira Islands. Seeds presented through Prof. William T. Horne, College of Agriculture, Riverside, Calif. Received June 1, 1931.

An evergreen shrub, native to tropical Brazil, up to 20 feet high with ovate-lanceolate, glossy leaves 1 to 2 inches long, creamy-white flowers, and edible red-ribbed fruits an inch in diameter, resembling a miniature tomato.

For previous introduction see 59313.

93492. DIOSCOREA ALATA L. Dioscoreaceae. **Winged yam.**

From Cuba. Tuber presented by Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received May 29, 1931.

A purple-skinned yam, introduced originally by the United States Department of Agriculture from Hawaii and recorded under No. 10314, erroneously named *Smilax sandwicensis.*

93493 and 93494. ZEA MAYS L. Poaceae. **Corn.**

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 2, 1931.

Introduced for the use of department specialists.

93493. Yellow. **93494.** White.

93495. PERESKIA GRANDIFOLIA Haw. Cactaceae.

From the Canal Zone. Cuttings presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received June 3, 1931.

A shrub or tree 6 to 15 feet high, with a short spiny trunk, fleshy branches, oblong leaves 3 to 6 inches long, and terminal clusters of rose-colored to white flowers 1 to 2 inches across. It is native to Brazil.

93496 to 93536.

From the West Indies. Seeds collected by C. B. Doyle and R. L. Taylor, Bureau of Plant Industry. Received June 3, 1931.

93496 to 93527. GOSSYPIUM spp. Malvaceae. **Cotton.**

93496 to 93536—Continued.

93496 to 93507. GOSSYPIUM BARBADENSE L. **Sea-Island cotton.**

Nos. 93496 to 93498 were collected on the island of St. Kitts.

93496. Hand picked.

93497. Second grade.

93498. New seed cotton.

93499. Average from the island of Nevis.

93500. Second generation from the island of Montserrat.

Nos. 93501 to 93509 were collected on the island of Puerto Rico.

93501. Grade 1.

93502. Grade 2.

93503. Grade 3.

93504. Grade 4, *Amarillo* (South).

93505. *Pelan* cotton.

93506. *Haitian* cotton.

93507. Lowest grade.

93508 to 93516. GOSSYPIUM BARBADENSE × TOMENTOSUM.

Collected on the island of Puerto Rico.

93508. Grade 1.

93509. Grade 2.

93510. Grade 3.

93511. Grade 7.

93512. Grade 8.

93513. Grade 11.

93514. Grade 12.

93515. Grade 14.

93516. From the town of Rio Piedras.

93517. GOSSYPIUM sp.

Collected on the island of Nevis. Seed presented by the Cotton Spinners' Association.

Nos. 93518 to 93520 were collected on the island of Antigua.

93518. GOSSYPIUM sp.

Peasant seed.

93519. GOSSYPIUM sp.

Planting seed.

93520. GOSSYPIUM sp.

93521. GOSSYPIUM sp.

Unselected seed from the island of St. Vincent.

93522. GOSSYPIUM sp.

Collected on the island of Puerto Rico, at Jones's planting.

93523. GOSSYPIUM sp.

Collected on the island of St. Kitts.

Nos. 93524 to 93527 are samples of wild cotton.

93524. GOSSYPIUM sp.

Collected on St. Croix, Virgin Islands.

93496 to 93536—Continued.

93525. GOSSYPIUM sp.

Collected at East End, island of St. John, Virgin Islands.

93526. GOSSYPIUM sp.

Collected on St. Croix, Virgin Islands.

93527. GOSSYPIUM sp.

Collected on Nevis Island, British West Indies.

93528. ACROCOMIA ACULEATA Lodd. Phoenicaceae. **Grugru palm.**

A tall palm up to 50 feet high, native to Trinidad, with pinnate leaves 10 to 12 feet long and brownish fruits about half the size of those of *A. sclerocarpa* of Brazil, to which it is closely related.

93529. COFFEA ARABICA L. Rubiaceae. **Arabian coffee.**

Collected at the Brown estate, island of Trinidad.

93530. CORYPHA UMBRACULIFERA L. Phoenicaceae. **Talipot palm.**

Collected on the island of Trinidad. A large palm up to 80 feet high. The leaves, 12 feet long and 16 feet broad, are made up of lobed segments, and the creamy white flowers are in terminal panicles 20 feet long. It is native to Ceylon.

For previous introduction see 76758.

93531. HYOPHORBE sp. Phoenicaceae. **Palm.**

Collected in the public park at Basseterre, island of St. Kitts.

93532. LICUALA PELTATA Roxb. Phoenicaceae. **Palm.**

Collected on the island of Trinidad. An Indian palm, native to the foothills of the Himalayas, with stems 8 to 15 feet high and round leaves, 3 to 5 feet in diameter, deeply lobed into 12 to 30 obtusely 2-parted segments each bearing several teeth up to 2 inches long. The ellipsoid, orange-colored fruits, half an inch long, are borne in large clusters.

For previous introduction see 34742.

93533. MAURITIA FLEXUOSA L. f. Phoenicaceae. **Mirity.**

Collected on the island of Trinidad. A palm, native to tropical Brazil, which grows to a height of 150 feet and 30 inches in diameter. The leaves are from 9 to 16 feet long. This is one of the so-called ivory-nut palms. The fruit is spherical, about the size of a small apple, and covered with small smooth reticulated scales. The spadix, loaded with fruit, is of immense weight, often more than two men can carry. The tree forms extensive forests in the Amazon Delta and provides material for subsistence and arts of the Indians.

For previous introduction see 31311.

93534. MYRISTICA FRAGRANS Houtt. Myristicaceae. **Common nutmeg.**

Collected on the island of Trinidad. An East Indian tree 20 to 25 feet high with smooth, grayish-brown bark, oval, dark-green, sharp-pointed leaves, 3 to 6 inches long, slightly aromatic when bruised, and pale-yellow flowers in axillary racemes, followed by nearly spherical, pearlike drupes. The flesh of these drupes is yellow and full of astringent juice and incloses a hard-shelled nut, the seed of which is the nutmeg of commerce.

For previous introduction see 44565.

Nos. 93535 and 93536 were collected in a public park at Basseterre, on the island of St. Kitts.

93535. PTYCHOSPERMA sp. Phoenicaceae. **Palm.**

93536. THRINAX sp. Phoenicaceae. **Palm.**

93537 and 93538.

From the Union of Soviet Socialist Republics. Seeds presented by G. Grossmann, Bureau of Introduction, Leningrad. Received June 3, 1931.

93537. CASSIA MEDSGERI Shafer. Caesalpiniaceae.

A perennial herb, 3 to 4 feet high, closely resembling *Cassia marilandica*, from which it differs in the orange-colored flowers and in having the joints of the pod broader than long. Of possible value as a forage crop or for green manure.

93538. PSORALEA CORYLIFOLIA L. Fabaceae. **Scurf-pea.**

An erect annual herb 1 to 3 feet high, with round, sinuate-margined, black-dotted leaves 1 to 3 inches long and dense heads of 10 to 30 small yellow flowers. It is native to India and is used as green manure.

93539 and 93540.

From the Union of South Africa. Seeds purchased from Kate C. Stanford, Stellenbosch. Received June 4, 1931.

93539. LACHENALIA UNICOLOR Jacq. Liliaceae. **Cape-cowslip.**

A bulbous perennial with usually strap-shaped leaves 6 inches long and an inch broad and a stiffly erect peduncle 6 inches high, bearing a dense raceme 2 to 4 inches long and bell-shaped, bright-red flowers one-fourth of an inch long. It is native to South Africa.

93540. LACHENALIA UNIFOLIA Jacq. Liliaceae. **Cape-cowslip.**

A bulbous perennial usually having a single linear leaf clasping the base of the flower stem for 2 to 3 inches. The bell-shaped white flowers, tinged with red or blue, are half an inch long and are borne in a lax raceme on a peduncle 1 foot high. It is native to South Africa.

93541. BARRINGTONIA ASIATICA (L.) Kurz (*B. speciosa* Forst.). Lecythidaceae.

From Jamaica, British West Indies. Seeds presented by H. Hood-Daniel, Port Antonio. Received June 5, 1931.

A handsome tree 50 feet high, with thick leathery leaves, bright-green and a foot long, racemes of large showy flowers having white petals, and crimson-tipped stamens resembling a brush. The smooth shining black fruits are shaped like a 4-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 80176.

93542. ZEA MAYS L. Poaceae. **Corn.**

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 8, 1931.

Indian name, *Chisè*. Corn grown in the mountains 10,000 feet above sea level. It matures in 11 months.

93543. GOSSYPIUM DAVIDSONII Kellogg. Malvaceae.

From San Marco Island, Lower California, Mexico. Seeds presented through E. H. Page, Oakland, Calif. Received June 8, 1931.

For previous introduction and description see 92901.

93544. MICHELIA CHAMPACA L. Magnoliaceae. **Champac.**

From Brazil. Seeds presented by P. H. Rolfs, Consultor Technico de Agricultura do Estado de Minas Geraes. Received June 8, 1931.

A tall evergreen tree, native to the Himalayas, with pubescent branchlets, ovate-lanceolate leaves 8 to 10 inches long, and axillary, usually solitary, pale-yellow fragrant flowers 2 inches across.

For previous introduction see 73860.

93545. ZEA MAYS L. Poaceae. **Corn.**

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 8, 1931.

Introduced for the use of department specialists.

93546 and 93547. LOPHIRA ALATA Banks. Dipterocarpaceae.

From Africa. Seeds presented by the conservator of forests, Forestry Department, Accra, Gold Coast. Received June 9, 1931.

A large tree, native to tropical Africa, with obovate, crispate-undulate, coriaceous leaves 30 inches long, and terminal, pyramidal panicles of creamy white flowers 1 to 2 inches across. The fruit is subtended by the calyx, one lobe of which is enlarged to 4 inches long and is crimson when the nut is ripe.

93546. *Oda* No. 1. Collected in a high forest in the Oda district near Foso.

93547. *Kumasi* No. 2. Collected in a savanna forest in northwest Ashanti, a few miles south of Kintampo.

93548. IPOMOEA sp. Convolvulaceae.

From El Cayo, British Honduras. Tubers collected by H. H. Bartlett, director, department of botany, University of Michigan, Ann Arbor. Received June 9, 1931.

Wild sweetpotatoes, obtained from the Indians at San Antonio, a Maya village in the Cayo district. These tubers are used as food by the Indians.

93549. PIMENTA OFFICINALIS Lindl. Myrtaceae. **Allspice.**

From Honolulu, Hawaiian Islands. Seeds presented by Harold L. Lyon, in charge, department of botany and forestry, experiment station of the Hawaiian Sugar Planters Association. Received June 9, 1931.

93549—Continued.

A small tree, native to tropical America, whose unripe berries, when dried, form the allspice of commerce. It prefers a hot, rather dry climate, with alluvial, well-drained soil.

For previous introduction see 55102.

93550 to 93554. SORGHUM VULGARE Pers. Poaceae. **Sorghum.**

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Applied Botany. Leningrad. Received June 10, 1931.

A collection of native varieties of dwarf broomcorn from Turkmenistan.

93550. *Archman.* C. I. No. 1005.

93551. *Bairam-Ali.* C. I. No. 1006.

93552. *Duslu-Tepé.* C. I. No. 1004.

93553. *Mokhtum-Kala.* C. I. No. 1003.

93554. *Tolotan.* C. I. No. 1007.

93555. DIOSCOREA sp. Dioscoreaceae. **Yam.**

From China. Tubers collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received November 7, 1930. Numbered in June, 1931.

No. 7313. From Fou Chow Ssu Temple, September 29, 1930. Aerial tubers of a yam with cylindrical roots; one of the small-tubered yams of northern China.

93556. PIERIS sp. Ericaceae.

From China. Seeds presented by T. D. Payne, China Inland Mission, Luchang, Yunnan. Received June 11, 1931.

A small tree collected at 5,000 feet altitude in latitude 26° north.

93557 to 93571. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Manchuria and Japan. Seeds collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received June 12, 1931.

Nos. 93557 to 93566 were received through the Mitsubishi Shoji Kaisha (Ltd.), Dairen, Manchuria.

Nos. 93557 to 93559 came originally from Yinkkou, Manchuria.

93557. No. 7930. A mixed sample of medium to medium-small yellow varieties, used for oil and oil meal.

93558. No. 7931. *Green.* A medium-sized light yellowish-green bean with pale hilum and yellow germ.

93559. No. 7932. *Paimei tou* (white eyebrow). A medium-sized oval, very light-yellow bean with pale hilum.

93560. No. 7933. *Paimei tou* (white eyebrow). Medium-small to medium-sized oval, light-yellow beans with pale hilum; originally from Mukden (Fengtieng), Manchuria.

93561. No. 7934. *Ching yuan tou* (excellent grade). An oval light-yellow bean of medium size with light-brown hilum; originally from Tielling, Manchuria.

93557 to 93571—Continued.

93562. No. 7935. A mixed sample of light-yellow oval beans, small to medium in size; originally from Kaiyuan, Manchuria.

93563. No. 7936. A yellow bean, small to medium in size; originally from Ssupingkai, Manchuria.

93564. No. 7937. A light-yellow, nearly round bean of medium size with brown hilum; originally from Kungchuling, Manchuria.

93565. No. 7938. A light-yellow bean of medium size; originally from Kirin, Manchuria.

93566. No. 7939. A light-yellow bean, medium-small to medium in size; originally from Changchung, Manchuria.

Nos. 93567 to 93571 were received from Fukushima Ken, Japan.

93567. No. 7940. *Asahi* No. 60 (sunrise No. 60). A medium large, oval, light-yellow bean with brown hilum.

93568. No. 7941. *Shiroke* No. 9 (white hair No. 9). A medium large, oval, slightly flattened, light-yellow bean with pale hilum.

93569. No. 7942. *Mejiro* No. 1 (white eye No. 1). A medium large, nearly round, light-yellow bean with pale hilum.

93570. No. 7943. *Daruma* No. 2. A medium size, oval, light-yellow bean with brown hilum.

93571. No. 7944. *Shiro hachikoku.* A large nearly round, light-yellow bean with pale hilum.

93572. SEDUM DENDROIDEUM Moc. and Sesse. Crassulaceae.

From Mexico. Seeds collected by Paul Russell and Max Souviron, Bureau of Plant Industry. Received September 26, 1930. Numbered in June, 1931.

No. 16. Collected southwest of Tlalpam, Distrito Federal, in a lava field. A much-branched shrub 2 to 3 feet high, often forming dense masses. The flat, fleshy, obovate leaves are 1 to 2 inches long, and the small bright-yellow flowers are borne in paniculate cymes. It is native to Mexico.

93573. BAMBUSA VULGARIS Schrad. **Feather bamboo.**

From India. Seeds presented by R. N. Parker, forest botanist, Forest Reserve Institute and College, Dehra Dun, United Provinces. Received June 13, 1931.

This seed was received under the name *Bambusa longispiculata,* but specimen culm sheaths sent later from the same source are typical of *B. vulgaris,* and the young plants grown from the seeds appear to be of that species.

93574 and 93575. HAYLOCKIA PUSILLA Herbert. Amaryllidaceae.

From Uruguay. Bulbs presented through Dr. William A. Maxon, United States National Museum. Received June 13, 1931.

A bulbous perennial, native to Uruguay, with linear, radical leaves appearing after the flowers. The scape is very short and bears a single flower with greenish tube 1 to 2 inches long and a white or straw-colored limb of equal length, tinged outside with purple or rose.

93574. A form with white flowers.

93575. A form with yellow flowers.

93576. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

From Morocco. Seeds presented by H. Brayard, director, Ferme Expérimentale, Marrakech. Received June 16, 1931.

Luzerne of Tafilalet.

93577. ENTEROLOBIUM CYCLOCARPUM (Jacq.) Griseb. Mimosaceae.

From Mexico. Seeds presented by Aurelio Miza, Piedras Negras, Vera Cruz. Received June 17, 1931.

One of the most beautiful and largest trees of the Pacific region of tropical America, where it grows at an altitude of about 2,700 feet. The trunk sometimes becomes 3 feet in diameter. The compound leaves close up during the night, and the pods are twisted into a short spiral. The leaves and pods are much relished by cattle.

For previous introduction see 80690.

93578 and 93579.

From the Hawaiian Islands. Seeds presented by the experiment station of the Hawaiian Sugar Planters' Association, Honolulu, through Mr. Wray, of Flamingo Groves, Fla. Received June 17, 1931.

93578. BARYXYLUM AFRICANUM (Sond.) Pierre (*Peltophorum africanum* Sond.). Caesalpiniaceae.

A handsome, yellow-flowered tree with a habit like a mimosa, native to tropical and subtropical Africa. It becomes 20 to 30 feet high and should be tested in southern Florida and also in southern California as an ornamental shade tree.

For previous introduction see 62899.

93579. BARYXYLUM BRASILIENSE (L.) Pierre. Caesalpiniaceae.

A tree up to 80 feet high with bipinnate leaves of small leaflets and axillary or terminal racemes of small yellow flowers. The orange-colored wood is elastic, tough, and durable and takes on a fine polish. The tree is native to Central America.

For previous introduction see 87499.

93580. OLEA EUROPAEA L. Oleaceae. **Common olive.**

From Greece. Cuttings presented by George Choremis, Chios. Received June 18, 1931.

Sweet olives which may be eaten fresh from the tree without being processed.

93581. LITCHI CHINENSIS Sonner. (*Nephelium litchi* Cambess.). Sapindaceae. **Lychee.**

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received June 22, 1931.

No. 197. *Nomai* lychee, from the Lingnan University orchards.

93582 to 93584.

From Central America. Plants purchased from the United Fruit Co., through Wilson Popenoe, Research Department, Tela, Honduras. Received in June and September, 1930. Numbered in June, 1931.

93582. GARCINIA MANGOSTANA L. Clusiaceae. **Mangosteen.**

93583 and 93584. PERSEA SCHIEDEANA Nees. Lauraceae. **Coyo.**

This plant, known as yas in Costa Rica and coyo in Guatemala, occurs from southern Mexico to Panama. In Costa Rica it is found abundantly on the slopes of Irazu at altitudes between 4,000 and 6,000 feet. The fruits greatly resemble avocados. The tree is of slow growth and probably does not bear until it is 8 or 10 years old.

For previous introduction see 80540.

93585 to 93588.

From the Hawaiian Islands. Seeds presented by D. T. Fleming, Lahaina, Maui Island. Received June 22, 1931.

93585. CASSIA sp. Caesalpiniaceae.

Hybrid showers.

93586. CASSIA sp. Caesalpiniaceae.

Rainbow showers.

93587. CASUARINA sp. Casuarinaceae.

93588. DESMANTHUS VIRGATUS (L.) Willd. Mimosaceae.

A white-flowered woody plant, common in many places in the West Indies. The leaves, which are sensitive, are bipinnate, and the pods are linear compressed. The brown polished seeds are sometimes used as beads.

For previous introduction see 49407.

93589. OLEA EUROPAEA L. Oleaceae. **Common olive.**

From Greece. Cuttings presented by George Choremis, Chios. Received June 22, 1931.

For previous introduction and description see 93580.

93590 to 93598.

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received June 23, 1931.

93590. FICUS sp. Moraceae. **Fig.**

No. 331. A wild fig which gives promise as a stock for better varieties.

93591 to 93595. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

93591. No. 230. *Ming lau chang.* From Lingtam (near Towah), Honan Island, Canton. Grafted on Australian lemon.

93592. No. 97. *Om lau chang.* From Lokongtung. Grafted on *C. grandis, Kwangsai shatin yau.*

93593. No. 214. *Om lou chang.* From Towah, Honan Island, Canton. Grafted on Australian lemon.

93594. No. 232. *Om lou chang.* From Lingtam (near Towah), Honan Island, Canton. Grafted on Australian lemon.

93590 to 93598—Continued.

93595. No. 279. *Om lou chang.* From Lokongtung. Grafted on *C. grandis, Kwangsai shatin yau.*

93596 and 93597. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

93596. No. 258. *Szwui kom,* Szwui mandarin. From Lokongtung. Grafted on Australian lemon.

93597. No. 259. *Szwui kom,* Szwui mandarin. From Lokongtung. Grafted on *C. grandis, Kwangsai shatin yau.*

93598. CITRUS sp. Rutaceae.

No. 248. *'T'in ling mung,* sweet ling mung. From Towah, Honan Island, Canton. Grafted on Australian lemon. An interesting and important form for study.

93599. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From England. Seeds presented by Dr. J. L. North, Royal Botanic Society, London. Received June 23, 1931.

Originally from Yugoslavia (Belgrade).

93600. BEGONIA ENGLERI Gilg. Begoniaceae.

From England. Seeds grown in the Royal Botanic Gardens, Kew, presented by Mrs. H. H. Buxton, Peabody, Mass. Received June 23, 1931.

A stout herbaceous perennial, native to tropical Africa, with red hairy stems 5 feet high and large, ovate-oblong, deeply serrate leaves having red veins. The numerous pink flowers are borne on long pendulous peduncles.

93601 and 93602.

From Java. Seeds presented by the Tuinbouwkundig Ambtenaar, Pasar Minggoe. Received March 19, 1930. Numbered in June, 1931.

93601. CITRUS AMBLYCARPA (Hassk.) Ochse. Rutaceae.

A small, almost unarmed tree, native to Java. The lanceolate leaves are 2 to 3 inches long, and the roundish fruits are only about an inch in diameter, the smallest of any of the Javanese species of citrus.

93602. CITRUS AURANTIFOLIA (Christm.) Swingle. Rutaceae. **Lime.**

Djeroek nipis.

93603. PITHECOLLOBIUM PRUINOSUM Benth. Mimosaceae.

From New South Wales, Australia. Seeds presented by G. P. Darnell-Smith, director, Botanic Gardens, Sydney. Received June 25, 1931.

A tree, native to Australia, with the branchlets, leaves, and inflorescence covered with rusty tomentum. The bipinnate leaves are made up of 2 to 5 pairs of pinnae, each bearing 3 to 4 pairs of rhomboidal leaflets 2 to 3 inches long. The small white flowers are borne in globular umbels and are followed by flat, curved, or twisted pods several inches long.

93604. CYCLAMEN sp. Primulaceae.

From the island of Chios, Greece. Corms presented by M. Pantiledes, through David Fairchild, with the Allison V. Armour expedition. Received July 14, 1930. Numbered in June, 1931.

No. 3543.

93605. PELARGONIUM sp. Geraniaceae. **Geranium.**

From Italy. Cuttings presented by William McLeod Braggins, superintendent, La Mortola Gardens, Ventimiglia, through David Fairchild, with the Allison V. Armour expedition. Received August 5, 1930. Numbered in June, 1931.

No. 3619. Variety *Bragginsii*. A hybrid between the ivy-leaved and the common pelargonium, found in the La Mortola Gardens. Because of its resistance to drought, its extremely long flower stalks, and its brilliant scarlet color and everblooming habit it is thought worthy of dissemination in America.

93606. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Spain. Seeds presented by Stanley F. Morse, Morse Agricultural Service. Received June 26, 1931.

Melon de Sevilla. A delicious melon which can be kept for two or three months into the winter. It is said to be much richer and juicier than the honeydew.

93607 and 93608. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Australia. Cuttings presented by the Colonial Sugar Refining Co. (Ltd.), Sydney, New South Wales. Received June 26, 1931.

93607. No. 219. **93608.** No. 221.

93609. ZEA MAYS L. Poaceae. **Corn.**

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received June 29, 1931.

Maiz muchito. A variety which matures in eight months.

93610. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean.**

From India. Seeds presented by the Deputy Director of Agriculture, Northern Circle, Mandalay, Burma. Received June 30, 1931.

A large-seeded variety.

93611 to 93622.

From Quibdo, Colombia. Seeds collected by W. A. Archer. Received June 9, 1931.

93611. CARICA PAPAYA L. Papayaceae. **Papaya.**

The fruit is globular, 8 inches in diameter, and the flesh is sweet with a delicious flavor and the color and consistency of a cantaloupe.

93612. CASSIA OCCIDENTALIS L. Caesalpiniaceae.

Potra. No. 2029. This plant is used as a substitute or adulterant of coffee in the Choco.

93611 to 93622—Continued.

93613. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

Frizol flanco. Said to grow wild in Rio Sinu.

93614. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

Collected at Quibdo, Choco Province, June 1, 1931. The tomatoes of Choco grow under most dire conditions. Every-house has a hanging garden which may consist merely of a few tin pails on the window sill or on a post or perhaps perched all along a trestle of boards 5 or 6 feet above the ground; it may be a wooden box. The soil is always mixed with a large percentage of charcoal to prevent water-logging. The plants are spindling, 1 to 2 feet high, and the small round fruits, 2 to 4 inches in diameter, are flattened at the stem end and yellowish red in color.

93615. PASSIFLORA LIGULARIS Juss. Passifloraceae. **Sweet granadilla.**

No. 1852. *Badea*. A cultivated vine, collected in Quibdo, April 10, 1931. The fruit is eaten raw or cooked; it is also used in sherbets or iced drinks.

93616 to 93619. PERSEA AMERICANA Mill. (*P. gratissima* Gaertn. f.). Lauraceae. **Avocado.**

Collected near Quibdo, June 1, 1931. The flavor of these fruits is much superior to the Florida varieties, but some are slightly fibrous.

93616. *A*. A large-fruited variety 5 inches in diameter and 9 inches long, with a short curved neck.

93617. *B*. A pear-shaped variety 5 inches long and over 3 inches in diameter. The stem is often at one side.

93618. *C*. *Aguacate de pepa floja*. A necked variety 7 inches long and over 3 inches in diameter. The seed is loose in the cavity.

93619. *D*. A cucumber-shaped variety 7 inches long and over 3 inches in diameter.

93620. EPIDENDRUM NOCTURNUM Jacq. Orchidaceae. **Orchid.**

No. 1866. An epiphytic orchid collected April 11, 1931.

93621. SCHRADERA sp. Rubiaceae.

Queda. Collected at the headwaters of the Rio Tutunendo, north of Quibdo, May 21, 1931. A native plant which the natives chew to preserve their teeth. It is rambling in habit, 6 to 10 feet long, and grows in dense woods where the climate is hot and humid and the rainfall heavy.

93622. ZEA MAYS L. Poaceae. **Corn.**

Indian corn collected on the Atrato River, at Lloro, above Quibdo, May, 1931.

93623 to 93747. ZEA MAYS L. Poaceae. **Corn.**

From the Union of Soviet Socialist Republics. Seeds presented by the Institute of Plant Industry and New Cultures, Leningrad, through J. G. Dickson, United States Department of Agriculture. Received June 30, 1931.

93623 to 93747—Continued.

F. P. I. No.	Leningrad No.	Designation and source
93623	207	Hickox, Haage & Smith, Germany
93624	566	United States of America.
93625	577	Do.
93626	616	Do.
93627	621	Do.
93628	796	Flint or squaw corn from Louisiana.
93629	1126	Chinquantino, from Germany.
93630	1292	Russian Socialist Federal Soviet Republic.
93631	1425	Afghanistan.
93632	1427	Do.
93633	1428	Do.
93634	1441	Do.
93635	1442	Do.
93636	1572	Tashkent.
93637	1575	Do.
93638	1612	Armenia.
93639	1624	Do.
93640	1638	Do.
93641	1644	Do.
93642	1681	Ural region.
93643	1689	Asia Minor.
93644	1698	Persia.
93645	1700	Do.
93646	1723	Nikdo-Ussuriisk region.
93647	1748	Ukraina.
93648	1821	Tiflis.
93649	1824	Asia Minor.
93650	2049	Kazakstan.
93651	2751	Far Eastern Territory.
93652	2766	Do.
93653	2778	Turkestan.
93654	2796	Central Asia.
93655	3390	Do.
93656	3409	Blagoveshehensk (flint).
93657	3409	Amur region.
93658	3427	Central Asia.
93659	3428	Tashkent.
93660	3428	Central Asia.
93661	3435	Uzbekistan.
93662	3538	Africa.
93663	3653	France.
93664	3666	Zurich, Switzerland.
93665	3670	Asia Minor.
93666	3680	Do.
93667	3702	Do.
93668	3717	Do.
93669	4665	Turkmenistan.
93670	4666	Do.
93671	4667	Do.
93672	4670	Do.
93673	4671	Do.
93674	4672	Do.
93675	4673	Do.
93676	4674	Do.
93677	4677	Do.
93678	4678	Do.
93679	4679	Turkestan.
93680	4680	Turkmenistan.
93681	4682	Do.
93682	4684	Do.
93683	4685	Do.
93684	4686	Do.
93685	4687	Do.
93686	4688	Do.
93687	4689	Do.
93688	4690	Do.
93689	4693	Do.
93690	4696	Do.
93691	4698	Do.
93692	4700	Do.
93693	4711	Persia.
93694	4739	Germany.
93695	4739 Cer.	Germany (flint).
93696	4740 Cer.	Germany.
93697	4749	Ufim Bezenguk Experiment Station.
93698	4750	Bezenchukskia from the Bezenguk Experiment Station.
93699	4795	Ural district.
93700	4797	Do.
93701	4903	Asia Minor.
93702	4913	Eastern Georgia Caucasus.
93703	4914	Tiflis.
93704	4917	Do.
93705	4918	Do.
93706	4919	Do.
93707	4920	Do.
93708	4921	Do.
93709	4922	Do.
93710	4955	Chili.
93711	4970	Northwestern India.
93712	4972	Do.
93713	4975	Jugoslavia.
93714	5048	Uzbekistan.
93715	5060	Far eastern region.
93716	5071	North China.
93717	5084	North China (flint).
93718	5088 Cer.	North China.
93719	5089	Chinese Eastern Railway, agronomy department.
93720	5106	Far East, Vladivostok region.
93721	5181 Cer.	Northern China (flint).
93722	5287	Western China.
93723	5292	Do.
93724	5368	Western Georgia.
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93726	5371	Do.
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93729	5375	Do.
93730	5376	Do.
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93741	5546	Burley County, Tambov Experiment Station.
93742	5547	Beloiaroepsheno from Omsk, West Siberian Regional Experiment Station.
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93745	5570	Western Transcaucasian Adjametsk Experiment Station.
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93747	5582	Sterling from Dneprepetrovsk Experiment Station.

93748. STEVIA REBAUDIANA Bertoni. Asteraceae.

From Cuba. Cuttings presented by Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received June 30, 1931.

Ka-á he-é (sweet herb). A herbaceous perennial 20 inches high with small leaves about an inch long which are said to be 200 times as sweet as cane sugar. It is native to Paraguay, where it grows wild in the highlands. The sweet taste is due to a glucoside, which is said to be safe for diabetics.

93748—Continued.

For previous introduction see 54677.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 108

Washington, D. C. ▼ Issued May, 1933

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JULY 1 TO SEPTEMBER 30, 1931 (Nos. 93749–94282)

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INTRODUCTORY STATEMENT

The present inventory, recording the materials arriving between July 1 and September 30, 1931, inclusive (Nos. 93749–94282), differs from former inventories in that most of its records concern gifts and exchanges from private individuals and institutions rather than the results of exploration conducted independently by the division, which is most conspicuously represented by the collection of soybeans (Nos. 94153–94173) collected by Dorsett and Morse.

Among the many gifts are the large collections of seeds from the last Forrest expedition, generously presented by Maj. Lionel de Rothschild (Nos. 93871–93970, 93991–94063, 94100–94150) from his share in the returns of that exploration.

Interest in tropical fruits, particularly lychees, is reflected in Nos. 93971–93977, 94070–94073, and 94247–94257, which include many lychee forms collected by G. Weidman Groff at the Lingnan University, Canton, China.

Plants from Australia are well recognized with collections from C. A. Gardner, Government Botanist, Perth, Western Australia (Nos. 93780–93793), an important collection of Casuarina species, particularly needed for a Florida specialist; and from Ida W. Richardson (Nos. 93828–93845), comprising many ornamental shrubs and trees.

Famous botanic gardens are represented by seeds from Buitenzorg, Java (Nos. 94095–94098), Peradeniya, Ceylon (Nos. 94089–94094), and the Lloyd Botanic Garden, Darjeeling, India (Nos. 94075–94086), all of which contribute particular plants to complete, or to add to, various permanent collections.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., August 16, 1932.

156901—33——1

INVENTORY[1]

93749. ZEA MAYS L. Poaceae. **Corn.**

From Mexico. Seeds presented by Emil Makrinius, Concordia, Oaxaca. Received July 1, 1931.

Indian name, *Chise*. Corn grown in the mountains at 10,000 feet altitude; it matures in 11 months.

93750. ULMUS PUMILA L. Ulmaceae. **Chinese elm.**

From Manchuria. Seeds purchased from the Manshu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen. Received July 1, 1931.

Collected near Mukden, Manchuria, at 250 feet altitude. Introduced for the use of experimenters in the north-central Plains area.

93751 to 93755. AVENA spp. Poaceae. **Oats.**

From Uruguay, South America. Seeds presented by Dr. Alberto Boerger, Director del Instituto Fitotécnico y Semillere Nacional, La Estanzuela, Department Colonia. Received July 1, 1931.

Oat varieties introduced for the use of department specialists.

93751. AVENA BYZANTINA Koch.

No. 1095–A, 1332.

93752 to 93755. AVENA SATIVA L.

93752. No. 64–Q.

93753. No. 64–R.

93754. No. 64–S, 613321.

93755. No. 64–T.

93756 to 93762.

From Quibdo, Colombia. Seeds collected by W. A. Archer. Received July 2, 1931.

93756 to 93762—Continued.

93756. CARICA PAPAYA L. Papayaceae. **Papaya.**

Collected in May, 1931. A variety about 8 inches long and semiseedless. This type is frequently found in the region around Quibdo.

93757. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

Sapallo. Collected April 20, 1931, at Quibdo. A short-necked, light-green squash 9 inches long and over 5 inches in diameter with irregular cream markings on the globular body. The flesh, which has the color and odor of the Rocky Ford cantaloupe, is used in making dulces. The seeds are roasted and eaten.

93758. GUILIELMA GASIPAES (H. B. K.) Bailey (*G. speciosa* Mart.). Phoenicaceae. **Pupunha.**

An Amazonian palm, becoming ultimately about 60 feet high, closely allied to the pejibaye (*Guilielma utilis*). Like the pejibaye, it furnishes food for a great number of people in regions where it is indigenous; it appears to be of promise for cultivating as a food plant throughout the Tropics in congenial situations.

For previous introduction see 93359.

93759. PHYTELEPHAS MACROCARPA Ruiz and Pav. Phoenicaceae. **Ivory-nut palm.**

A tall tropical American palm with a thick, rough trunk and foliage resembling that of the coconut palm. The bony fruits are used for making buttons, etc.

For previous introduction see 74503.

93760. HEDYCHIUM CORONARIUM Koen. Zinziberaceae. **Common gingerlily.**

No. 1847. *Heliotropo*. Collected in a park at Quibdo, April 10, 1931. A tu-

[1] It should be understood that the names of varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identification, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

93756 to 93762—Continued.

berous-rooted perennial, 1 to 2 feet high, found growing in clumps. The white flowers have the odor of jasmine.

93761. VANILLA FRAGRANS (Salisb.) Ames. Orchidaceae.

No. 2117. *Bejucillo.* Collected May 20, 1931, above Quibdo on the Rio Atrato.

93762. ACANTHORHIZA sp. Phoenicaceae. **Palm.**

No. 2199. *Noli.* A small palm which grows from 10 to 20 feet high.

93763. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From the Philippine Islands. Seeds presented by the Bureau of Science, Department of Agriculture and Natural Resources, Manila. Received July 7, 1931.

A Philippine relative of the lychee (*Litchi chinensis*). The tree is about 50 feet high, with dark-green, pinnate leaves similar to those of the lychee and roundish oblong fruits about 1 inch long borne in loose terminal clusters. The tough, leatherlike shell of the fruit, which is covered with short spiny projections, incloses a scant edible pulp in which is embedded a relatively large seed. This seed is roasted and eaten. The tree may have value as a stock for the lychee.

For previous introduction see 80871.

93764. EUPHORBIA sp. Euphorbiaceae.

From Madagascar. Seeds presented by R. Decary, Ambovombe. Received July 2, 1931.

Said to be a rubber plant.

93765. CASSIA ABSUS L. Caesalpiniaceae.

From Africa. Seeds presented by Comm. L. Baldrati, University di Pisa, Asmara, Eritrea. Received July 2, 1931.

An erect annual tropical legume, about 2 feet high, with small red-yellow flowers. It is native to India and Egypt.

For previous introduction see 75976.

93766 and 93767. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Rumania. Seeds presented by the Samanta, Society for Seed and Plant Selections, Senad (Banat). Received July 3, 1931.

93766. Samanta 117.

93767. Samanta 1252.

93768. LOPHIRA ALATA Banks. Dipterocarpaceae.

From Africa. Seeds presented by H. C. Tebbitt, Director of Forests, Ibaden, Nigeria. Received April 7, 1931.

A large tree, native to tropical Africa, with obovate, crispate-undulate, coriaceous leaves 30 inches long and terminal, pyramidal panicles of creamy white flowers 1 to 2 inches across. The fruit is subtended by the calyx, one lobe of which is enlarged to 4 inches long and becomes crimson when the fruit is ripe.

For previous introduction see 93547.

93769. HYMENOCALLIS AMANCAES (Ruiz and Pav.) Nichols. Amaryllidaceae.

From Peru. Bulbs presented by Ralph H. Gray, Estación Experimental Agrícola, Lima. Received October 28, 1929. Numbered in July, 1931.

A tender bulbous plant about 2 feet high with large bright-yellow flowers. Native to Peru and Chile.

For previous introduction see 67993.

93770. URCEOLINA MINIATA (Herb.) Benth. and Hook. Amaryllidaceae.

From Huancayo, Peru. Bulbs presented by Paul G. Ledig, Huancayo Magnetic observatory, Department of Research in Terrestrial Magnetism of the Carnegie Institution of Washington, D. C. Received July 1, 1931.

A bulbous perennial native to the Andes of Peru and Bolivia. The solid scape, 1 foot high, bears two to six urn-shaped scarlet flowers 2 inches long, after which appear the narrowly ovate leaves 1 foot long.

93771. BAMBUSA MACROCULMIS A. Riviere. Poaceae. **Bamboo.**

From Algeria, Africa. Plants presented by Dr. R. Maire, Jardin d'Essais, Algiers. Received July 11, 1931.

A very distinct and valuable clump bamboo introduced from Cochinchina by the Jardin des Plantes, in Paris and sent to Algiers for trial; there is now a splendid avenue in the Jardin d'Essais, of Algiers.

For previous introduction see 79548.

93772 to 93774.

From La Sierra, near Medellín, Colombia. Seeds presented by W. A. Archer. Received July 13, 1931.

93772. BEGONIA sp. Begoniaceae.

No. 1516. Collected in February, 1931.

93773. SOLANUM sp. Solanaceae.

No. 1293. A vine 6 feet long, which is either flat on the ground or climbing on trees. The yellow flowers are purplish beneath, and the small green fruits, 1 inch in diameter, grow in clusters of 20 to 30.

93774. BOMAREA sp. Amaryllidaceae.

No. 1210. *Cortopico.* Collected January 29, 1931.

93775 to 93779.

From Chiengmai, Siam. Seeds presented by Mrs. William Harris. Received July 13, 1931.

93775 to 93777. CASSIA spp. Caesalpiniaceae.

93775. CASSIA FISTULA L. **Golden-shower.**

An ornamental tree which blossoms in Siam in May. The long pendulous racemes of large bright-yellow flowers appear after the leaves.

93776. CASSIA JAVANICA L.

A tree which blooms in the hottest part of the year. The gorgeous pink or rose-colored flowers, over 2 inches across, are borne in large clusters and appear before the leaves.

For previous introduction see 67542.

93775 to 93779—Continued.

93777. CASSIA NODOSA Buch.-Ham.

A moderate-sized, deciduous tree, with long drooping branches and glossy leaves; during May it bears a profusion of beautiful bright-pink, rose-scented flowers borne in dense clusters on long stalks. The leaves and flowers appear at the same time.

For previous introduction see 87505.

93778. DELONIX REGIA (Boj.) Raf. (*Poinciana regia* Hook.). Caesalpiniaceae. Royal poinciana.

Flower of the forest, peacock flower. A rapid-growing tree, native to Madagascar, which reaches a height of 20 to 40 feet with a wide-spreading crown. The leaves are 1 to 2 feet long with 10 to 20 pairs of pinnae, each pinna with numerous oval leaflets. The bright-scarlet flowers, 3 to 4 inches across, with the upper petal striped with yellow and more cuneate, the lower petals very prominently clawed, are in racemes, and are followed by pods which vary in length from 6 inches to 2 feet. This is one of the most striking and gorgeous of the tropical trees.

93779. LILIUM sp. Liliaceae. Lily.

Nepaul lily. Collected under a pine tree on a mountain ridge at 5,000 feet altitude.

93780 to 93793. CASUARINA spp. Casuarinaceae.

From Australia. Seeds presented by C. A. Gardner, Government Botanist, Perth, Western Australia. Received July 13, 1931.

93780. CASUARINA ACUTIVALVIS F. Muell.

An erect branched shrub with the internodes marked by 12 lines of low linear-subulate teeth and with rather large globular cones. The dark-brown leaves, 1 line long, are easily dislodged. Native to Victoria, Australia.

93781. CASUARINA BAXTERIANA Miquel.

A densely branched shrub with verticillate branches distinctly 7-angled to 8-angled, and with pale-green internodes up to one-fourth of an inch long.

93782. CASUARINA CAMPESTRIS Diels.

A dioecious shrub, 3 to 6 feet high, with numerous erect branches; native to Western Australia. The internodes are glaucous or shining green and striate.

93783. CASUARINA CORNICULATA F. Muell.

An erect branched shrub which has internodes lined with 8 or 10 rows of deltoid-lanceolate teeth and small globose cones 1 inch long. Native to Australia.

93784. CASUARINA DECUSSATA Benth.

A small tree closely resembling *Casuarina tortulosa*, with slender elongated branches arranged in fours, but the angles are very acute and two of them are more prominent than the others.

For previous introduction see 92478.

93785. CASUARINA DRUMMONDIANA Miquel.

A bushy shrub up to 3 feet high, with rigid, divaricate branchlets in whorls of five. It is native to Western Australia.

93780 to 93793.—Continued.

93786. CASUARINA FIBROSA Gardner.

A small, erect, densely branched shrub with nearly terete, finely striate branchlets in whorls of four to six. The cone scales are covered with coarse hairlike fibers. It is native to Western Australia.

93787. CASUARINA FRASERIANA Miquel.

A tall erect shrub or small tree closely related to *Casuarina distyla*, with rigid branches and with the leaves represented by very small scales in whorls.

For previous introduction see 92479.

93788. CASUARINA GLAUCA Sieber.

An Australian tree 60 to 70 feet high, usually straight and of rapid growth. The timber is red, beautifully marked, hard and tough, and is used there for cabinetwork, staves, and fuel. In periods of drought the foliage is used for feeding stock. When the trees are cut down, the young growth shoots up quickly from the stump. This variety grows in the coastal districts, marshy country, and frequently in land submerged with tidal water. It makes a very handsome shade tree.

For previous introduction see 75551.

93789. CASUARINA HELMSII Ewart and Gordon.

A Western Australian tree, 5 feet high, with slender terete branchlets 4 to 5 inches long. The nearly smooth cones are 1 inch long and about half an inch in diameter.

93790. CASUARINA HUEGELIANA Miquel.

A shrub or small tree, native to Western Australia, with round branchlets arranged in whorls of 8 to 12.

For previous introduction see 92480.

93791. CASUARINA HUMILIS Otto and Dietr.

An erect shrub 2 to 6 feet high, with the branchlets usually in whorls of four and the angles of the internodes prominent but obtuse. It is native to Western Australia.

93792. CASUARINA LEPIDOPHLOIA F. Muell.

A small or moderately large tree with very slender, linear, faintly angled branchlets. The cones are depressed-globose and about 1 inch in diameter. This species has hitherto been confused with *C. glauca*.

For previous introduction see 92483.

93793. CASUARINA THUYOIDES Miquel.

A straggling shrub 3 to 5 feet high, with numerous spreading slender branchlets about 1 inch long arranged in whorls of four or five. The ribs on the nearly round internodes are scarcely noticeable. It is native to Western Australia.

93794. EUPHORBIA sp. Euphorbiaceae.

From Algeria, Africa. Seeds presented by Dr. Henri Humbert, Faculté des Sciences, Laboratoire de Botanique, Algiers. Received July 13, 1931.

For previous introduction and description see 93764.

93795 to 93808.

From China. Seeds presented by Hugh W. Hubbard, Paotingfu. Received July 14, 1931.

A collection of commercial varieties, introduced for the use of department specialists.

93795 to 93800. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

93801. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

93802 and 93803. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

93804 to 93808. LAGENARIA LEUCANTHA (Duchesne) Rusby (*L. vulgaris* Seringe). Cucurbitaceae. **Calabash gourd.**

93809 to 93823.

From China. Seeds presented by Frank Dickinson, West China Union University, Chengtu. Received July 14, 1931.

A collection of commercial varieties, introduced for the use of department specialists.

93809. BENINCASA HISPIDA (Thunb.) Cogn. Cucurbitaceae. **Waxgourd.**

Dung squash. A variety which weighs up to 30 pounds.

93810. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

A small early variety.

93811. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

A vigorous growing, large cucumber.

93812 and 93813. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

93814. LUFFA CYLINDRICA (L.) Roemer (*L. aegyptiaca* Mill.). Cucurbitaceae. **Suakwa towelgourd.**

93815. PHASEOLUS ANGULARIS (Willd.) W. F. Wight. Fabaceae. **Adzuki bean.**

93816 to 93821. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

93822. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

93823. VIGNA SESQUIPEDALIS (L.) Fruwirth. Fabaceae. **Asparagus-bean.**

93824. ROYSTONEA REGIA (H. B. K.) O. F. Cook (*Oreodoxa regia* H. B. K.). Phoenicaceae. **Cuban royal palm.**

From Habana, Cuba. Seeds presented through the Plant Quarantine Control Administration. Received July 15, 1931.

A Cuban palm, up to 80 feet high and 2 feet in diameter, with pinnately divided leaves 10 feet long.

For previous introduction see 76790.

93825. PISTACIA sp. Anacardiaceae.

From Greece. Seeds presented by G. T. Choremis, of the island of Chios, through David Fairchild, agricultural explorer, Bureau of Plant Industry. Received July 16, 1931.

Turpentine tree.

For previous introduction see 91608.

93826. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From the Union of South Africa. Plants purchased from H. E. V. Pickstone & Bro. (Ltd.), Simondium, Cape of Good Hope. Received July 17, 1931.

Inkoos.

93827. SPONDIAS TUBEROSA Arruda. Anacardiaceae. **Imbu.**

From Bahia, Brazil. Seeds presented by Reo Bennett, Empresas Electricas Brazilieras, Rio de Janeiro. Received July 17, 1931.

A native Brazilian tree which branches 4 or 6 feet from the ground and forms a broad dense flat-topped crown. When the large limbs are cut and placed in the ground as fence posts they take root and grow. The fruits are oval, over an inch long, and light green in color. The skin is rather tough and incloses the translucent juicy pulp in which is embedded the single large seed. The pulp has an agreeable flavor, rather suggestive of a sweet orange. The fruit is used fresh, as well as being made into jams and jellies.

For previous introduction see 37861.

93828 to 93845.

From Perth, Western Australia. Seeds presented by Ida W. Richardson. Received July 18, 1931.

93828. ACTINOSTROBUS ACUMINATUS Parl. Pinaceae.

A small erect densely branched shrub, usually about 1 foot high, with short, thick, rigid leaves in whorls of three, and small cones half an inch in diameter, contracted at the tip into a distinct neck. It is native to Western Australia.

93829. ALYOGYNE HAKEAEFOLIA (Giordano) Alefeld. Malvaceae.

An erect evergreen shrub, native to Australia, with narrow lobed or deeply serrate leaves and large purple-lilac flowers. It is closely related to Gossypium.

For previous introduction see 86707.

93830. BAECKEA PENTANDRA F. Muell. Myrtaceae.

An erect heathlike shrub with slender branches 1 to 2 feet long and linear-obtuse leaves less than one-fourth of an inch long. The very small white or pink flowers are in clusters of one to three in the axils of the leaves. It is native to Western Australia.

93831. BRUNONIA AUSTRALIS J. F. Smith. Goodeniaceae.

A silky haired tufted perennial, native to Australia, with a rosette of linear-obovate entire leaves 2 to 4 inches long and scapes 6 to 12 inches high, bearing globular blue flower heads less than 1 inch in diameter.

For previous introduction see 77276.

93832. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). Myrtaceae. **Lemon bottlebrush.**

An evergreen shrub up to 12 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes 2 to 4 inches long of small flowers with long

93828 to 93845—Continued.

bright-red stamens. Native to southeastern Australia.

For previous introduction see 78532.

93833. CALLITRIS ROEI (Endl.) Benth. and Hook. Pinaceae.

A shrub or small tree 12 to 15 feet high, with stout flexuous branchlets. The leaves are reduced to scales the midribs of which form the angles on the stem between the nodes. It is native to Western Australia.

93834. CALOTHAMNUS QUADRIFIDUS Ait. Myrtaceae.

An erect evergreen bush 7 feet high, native to Western Australia, with crowded linear leaves about 1 inch long, somewhat like those of Hakea, and dense spikes of flowers which are conspicuous because of the long, rich crimson stamens.

For previous introduction see 79935.

93835. CONOSPERMUM BRACTEOSUM Meissn. Proteaceae.

An undershrub with usually simple stems 1 to 2 feet high and petioled basal leaves with nearly orbicular blades 1 inch long. The stem leaves are bractlike, closely appressed, and only half an inch long. The flexuose spikes, 2 to 3 inches long, are in the axils of the upper leaves and bear small white or violet flowers densely covered with silky white hairs. It is native to Western Australia.

93836. DAMPIERA WELLSIANA F. Muell. Goodeniaceae.

A tufted perennial, native to Western Australia, with thick glabrous radical leaves and erect woolly tomentose stems bearing bracted globular heads of small blue flowers.

For previous introduction see 77280.

93837. EUCALYPTUS ERYTHROCORYS F. Muell. Myrtaceae.

Usually a shrub 8 to 10 feet high, but sometimes a tree up to 30 feet. The broadly linear rigid leaves are 6 inches long. The large flowers in axillary clusters have bright-red fleshy caps over the buds, and the long stamens are yellow. The ribbed hemispherical fruits are 1 to 2 inches long. It is native to Western Australia.

93838. EUCALYPTUS MACROCARPA Hook. Myrtaceae.

A stout Australian shrub or small tree up to 15 feet high, with thick rigid cordate glaucous leaves 6 inches long and large solitary brilliant orange to crimson flowers.

For previous introduction see 77283.

93839 to 93841. MELALEUCA spp. Myrtaceae.

93839. MELALEUCA ELLIPTICA Labill.

A tall evergreen shrub, native to Western Australia, with elliptical evergreen leaves half an inch long and cylindrical spikes of large showy red flowers.

For previous introduction see 90713.

93840. MELALEUCA HYPERICIFOLIA J. E. Smith. **Dotted melaleuca.**

A tall glabrous shrub with opposite lanceolate to oblong leaves 1 to 2 inches long, dotted beneath, and rich-red flowers in spikes 2 inches long and about as thick. Native to Australia.

For previous introduction see 90860.

93841. MELALEUCA LATERITIA Otto and Dietr.

A graceful shrub, 6 to 12 feet high, with slender branches, alternate linear leaves about 1 inch long, and cylindrical spikes, 3 inches long, of scarlet-vermilion flowers. It is native to Western Australia.

For previous introduction see 67081.

93842 to 93844. VERTICORDIA spp. Myrtaceae.

93842. VERTICORDIA DRUMMONDII Schauer.

A shrub much resembling heather (*Calluna vulgaris*), with spreading branches and thick concave oblong leaves less than a quarter of an inch long. The flowers, borne in dense panicles, have top-shaped calyxes with the lobes divided into awl-shaped plumes, and the small petals are fringed at the tip. It is native to Western Australia.

93843. VERTICORDIA FONTANESII DC.

An erect bushy shrub, 3 to 4 feet high, with linear half-round or 3-cornered leaves about one-fourth inch long densely crowded on the shoots. The white or pink flowers on slender pedicels are borne in leafy panicles and are densely covered with soft hairs. It is native to Western Australia.

93844. VERTICORDIA ROEI Endl.

An erect shrub with broadly ovate leaves about one-fourth inch long and terminal leafy corymbs of small flowers which have calyx lobes, petals, and staminodes all fringed with long tawny cilia. It is a native to Western Australia.

93845. XYLOMELUM OCCIDENTALE R. Br. Proteaceae.

A large shrub or small tree up to 25 feet high, with branchlets and inflorescence densely brown tomentose. The ovate to oblong leaves, 3 to 5 inches long, have undulate prickly margins, and the small flowers, in dense spikes 3 to 5 inches long, are followed by woody fruits 2 to 3 inches long and 1 inch in diameter. It is native to Western Australia.

93846. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

From the Union of South Africa. Seeds purchased from H. E. V. Pickstone & Bros. (Ltd.), Simondium, Cape of Good Hope. Received July 18, 1931.

Pucelle de Malines.

93847. PRUNUS SARGENTII Rehder. Amygdalaceae. **Sargent cherry.**

From Jamaica Plain, Mass. Seeds presented by J. G. Jack, Arnold Arboretum. Received July 20, 1931.

To be grown and tested as stock for cultivated varieties of oriental cherries.

93848 and 93849.

From New Zealand. Plants presented by George A. Green, Consulting Horticulturist, New Zealand Horticultural Trades Association. Received July 22, 1931.

93848. CITRUS LIMONIA Osbeck. Rutaceae. **Lemon.**

Short-thorned *Lisbon* lemon, Benjamin's type. *Doncaster Lisbon* on sweet stock.

93849. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.). Rutaceae. **Grapefruit.**

Poorman (Morrison's type) grapefruit on sweet stock.

93850. PRUNUS sp. Amygdalaceae. **Plum.**

From Morocco, Africa. Seeds presented by C. Bey Rozet, Station Expérimentale de Marrakech. Received July 22, 1931.

Belsiana. A precocious and most vigorous variety which has the immense merit of thriving in the coastal region. The fruit is ripe the latter part of May and ships well. The tree is easily propagated by cuttings.

93851 to 93865.

From Tunisia, Africa. Cuttings and seeds presented by Robert W. Hodgson, Tunis. Received July 23, 1931.

93851 to 93858. CITRUS spp. Rutaceae.

93851. CITRUS SINENSIS (L.) Osbeck. **Orange.**

The *Beldi double,* or native double, orange from Menzel bou Zelfa.

93852. CITRUS AURANTIUM L. **Seville orange.**

Bouquetier de Nice. From Nabeul. A variety of the bigarade orange which is grown for the flowers for the manufacture of oil of neroli and oil of petit grain.

93853. CITRUS SINENSIS (L.) Osbeck. **Orange.**

Meltaise sanguine. From Menzel bou Zelfa.

93854. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. **Mandarin orange.**

Mandarine ordinaire, or common mandarin, from La Soukra.

93855. CITRUS SINENSIS (L.) Osbeck. **Orange.**

Neski. From Menzel bou Zelfa. A native sweet orange which lacks acid.

93856 to 93858. CITRUS MEDICA L. **Citron.**

93856. *Citron doux* or *limetta* (sweet lemon). From Menzel bou Zelfa.

93857. From Ras Djebel. The citron of Porto Farina, a large long citron of high repute in Tunisia.

93858. From Hammamet. The citron of Sicily, a very large fine citron.

93859 to 93865. OLEA EUROPAEA L. Oleaceae. **Olive.**

93859. *Barouni de Sahel.* From Soukra.

Nos. 93860 to 93864 are from the Forest of Djebel Amar, near Tunis, on the road to Bizerte.

93851 to 93865—Continued.

93860. *Barouni de Sahel.*

93861. *Bidh-el-Haman.*

93862. *Marsaline.*

93863. *Meski.*

93864. *Zarazi.*

93865. From Feriana. Seeds from an enormous old tree said to date back from the time of the Roman occupation. It is certainly the largest and finest olive tree in this region. Feriana is in the mountainous interior where the olive fly does not occur.

93866. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From the Canal Zone. Budsticks presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received July 25, 1931.

Fairchild.

93867 to 93869. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Ile de la Réunion. Cuttings presented by the Station Agronomique, Saint-Denis. Received July 27, 1931.

93867. *Naz.*

93868. *Uba marot.*

93869. *Uba seedling No. 4.*

93870. GARCINIA MANGOSTANA L. Clusiaceae. **Mangosteen.**

From Puerto Rico. Seeds presented by T. B. McClelland, Director, Agricultural Experiment Station, Mayaguez. Received July 29, 1931.

93871 to 93970.

From China. Seeds collected by the Forrest Expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received July 31, 1931.

93871. ACANTHOPANAX EVODIAEFOLIUM Franch. Araliaceae.

No. 29037. An unarmed shrub 10 feet high with trifoliolate leaves crowded at the ends of the branchlets. The small lanceolate acuminate leaflets are 3 or 4 inches long. Native to Yunnan, China.

93872. ACANTHOPANAX GIRALDII Harms. Araliaceae.

No. 29034. A densely prickly shrub up to 10 feet high with compound leaves made up of three to five sessile obovate doubly serrate leaflets 1 to 3 inches long. The inconspicuous greenish flowers are in solitary umbels and are followed by small black berrylike fruits. It is native to central and northern China.

93873. ACER LAXIFLORUM Pax. (*A. forrestii* Diels). Aceraceae. **Maple.**

No. 28395. A tree up to 50 feet high with cordate-oblong leaves 4 inches long, having two to four short lobes near the base and serrate margins. The yellowish flowers are borne in slender pendulous racemes and are followed by winged fruits spreading at right angles. It is native to western China.

For previous introduction see 93077.

93871 to 93970—Continued.

93874. ACONITUM sp. Ranunculaceae. **Monkshood.**

No. 28406.

93875. ALBIZZIA sp. Mimosaceae.

No. 28545.

93876. ANEMONE DEMISSA Hook. f. and Thoms. Ranunculaceae.

No. 28399.

93877. AQUILEGIA VULGARIS L. Ranunculaceae. **European columbine.**

No. 28402.

93878. ARALIA CHINENSIS L. Araliaceae. **Chinese aralia.**

No. 29026. A tall shrub up to 25 feet high, native to China, with prickly stems, bipinnate leaves made up of ovate closely serrate leaflets 2 to 4 inches long, and panicles of small flowers followed by small black fruits.

93879. CALLICARPA GIRALDIANA Hesse. Verbenaceae. **Beautyberry.**

No. 28996. A deciduous Chinese shrub 10 feet high with membranous light-green leaves, cymes of pink flowers, and dense clusters of round berrylike violet fruits which hang on after the leaves have fallen.

For previous introduction see 76183.

93880. CHALCAS KOENIGII (L.) Kurz. (*Murraya koenigii* Spreng.). Rutaceae.

No. 28998. A small tropical tree found chiefly in the dry region of the Jaffna Peninsula, northern Ceylon. The seeds are in season generally during April. It prefers light rich soil, and with cultivation will thrive at an altitude of 2,000 feet. The dried leaves are used in curries, soups, etc.

For previous introduction see 73098.

93881. COTONEASTER ACUMINATA Lindl. Malaceae.

No. 28397. A Himalayan shrub 12 to 15 feet high with ovate leaves, pinkish flowers, and bright-red fruits.

For previous introduction see 76729.

93882. COTONEASTER sp. Malaceae.

No. 28622.

93883. CRATAEGUS ORESBIA W. W. Smith. Malaceae. **Hawthorn.**

No. 28412. A shrub 12 to 20 feet high with branchlets, leaves, and flower clusters densely white pilose. The ovate leaves are 1 to 2 inches long and the small white flowers are borne in corymbs 2 to 3 inches across. The small white pilose fruits are a quarter of an inch long.

93884. DALBERGIA sp. Fabaceae.

No. 28999.

93885 and 93886. DELPHINIUM DELAVAYI Franch. Ranunculaceae. **Larkspur.**

A perennial herb 2 to 3 feet high, with incised 5-lobed leaves and dense racemes of blue flowers. It is native to Yunnan.

93885. No. 28582. **93886.** No. 28587.

93887. DELPHINIUM sp. Ranunculaceae. **Larkspur.**

No. 28380.

93871 to 93970—Continued.

93888. DIDISSANDRA GRANDIS Craib. Gesneriaceae.

No. 28519. A perennial herb about 10 inches high with a rhizome half an inch thick. The flat leathery lanceolate leaves, 2 to 4 inches long, are in a rosette. The purple-blue and white flowers, about half an inch long, are in small clusters on stalks 6 inches high. Native to rocky places on the Chungtien Plateau, southwestern China.

93889. EMBELIA sp. Myrsinaceae.

No. 28995.

93890. ERIOPHYTON WALLICHIANUM Benth. Menthaceae.

No. 28520. A dwarf herbaceous perennial only 6 inches high, with the stems, leaves, and inflorescence densely covered with soft white wool a quarter of an inch long. The round toothed leaves, 1 to 2 inches across, are very closely set on the stem, and the large 2-lipped yellow flowers, 1 to 2 inches long, are borne in axillary whorls. It is native to the alpine slopes of the central Himalayas in India.

93891 to 93894. EUONYMUS spp. Celastraceae.

93891. EUONYMUS GRANDIFLORUS Wall.

No. 28371. A small tree 10 or 12 feet high, native to India, with leathery oblong-ovate sharply serrate leaves 3 to 4 inches long and white flowers, 1 inch across, on slender pedicels as long as the leaves. The fruits are yellow, and the seeds are inclosed with red arils.

93892. EUONYMUS LANCEIFOLIUS Loes.

No. 29007. A tall shrub or small tree up to 30 feet high, native to central and western China. The lanceolate leathery leaves, 3 to 6 inches long, have crenately serrate margins, and the pale-yellow fruits inclose the orange arils which open and expose the crimson seeds.

93893. EUONYMUS ORESBIUS W. W. Smith.

No. 28681. A shrub 3 to 6 feet high with spreading branches, lanceolate leathery leaves 1 inch long, and axillary cymes of pyramidal fruits.

93894. EUONYMUS sp.

No. 29030.

93895. EXCOECARIA ACERIFOLIA F. Didr. Euphorbiaceae.

No. 28991. A small evergreen tree, native to the central and western Himalayas in India. The alternate oblanceolate leaves with crenulate margins are 3 to 6 inches long and the small flowers are borne in slender terminal and axillary spikes 1 to 2 inches long.

93896. GAULTHERIA FRAGRANTISSIMA Wall. Ericaceae.

No. 29050. A very fragrant evergreen shrub or small tree, found in the mountains of India from Nepal eastward to Bhutan. In summer it is loaded with white or pinkish flowers which are followed by beautiful racemes of blue-purple fruits.

For previous introduction see 65254.

93871 to 93970—Continued.

93897. GENTIANA STYLOPHORA C. B. Clarke. Gentianaceae.

No. 28809. A stout herbaceous perennial, native to the slopes of the Himalayas between 11,000 and 14,000 feet altitude in Sikkim, India. The simple stems are 3 to 6 feet high, the lower leaves are elliptic and 12 inches long, and the upper leaves are sessile and about 5 inches long. The widely funnel-shaped solitary flowers are borne on axillary peduncles up to 8 inches long.

93898. ILEX CORALLINA Franch. Aquifoliaceae. **Coral holly.**

No. 28997. A graceful bushy smooth shrub up to 10 feet in height which has not the rigid appearance of other hollies. The ovate-lanceolate leaves are thin, tough, fully fringed, and from 4 to 6 inches long, brilliant green on top and pale green underneath. The numerous fruits are small and coral red.

For previous introduction see 34836.

93899. ILEX YUNNANENSIS Franch. Aquifoliaceae. **Holly.**

No. 29020. A shrub up to 15 feet high, native to western China. The branchlets are densely villous, the ovate crenate-serrate leaves are 2 to 3 inches long, and the solitary globose berries are bright red and are borne on slender pedicels.

93900. INDIGOFERA sp. Fabaceae.

No. 29010.

93901. MERREMIA SIBIRICA (Pers.) Hall. f. Convolvulaceae. **Morning-glory.**

No. 28952.

93902. IRIS CHRYSOGRAPHES Dykes. Iridaceae. **Goldvein iris.**

No. 28446. One of the handsomest of the beardless irises; the velvety dark-purple flowers are brightened by golden reticulations at the throat running into a signal patch in the blade.

For previous introduction see 92495.

93903. IRIS WILSONI Wright. Iridaceae. **Wilson iris.**

No. 28420. An iris from western China, about 2 feet high. The flowers are yellow with some purple venation in the falls.

For previous introduction see 92496.

93904. JASMINUM HUMILE L. Oleaceae. **Italian jasmine.**

No. 29005. A shrub, usually evergreen, with upright and spreading branches, angled branchlets, and compound leaves made up of three to seven ovate, entire leaflets about 1 inch long. The bright yellow flowers, nearly 1 inch long, are borne in several-flowered open cymes. It is native to southern Asia.

93905. LIGUSTRUM LUCIDUM Ait. Oleaceae. **Glossy privet.**

No. 29006. An evergreen shrub or tree up to 30 feet high, native to China and Japan. The ovate-lanceolate coriaceous leaves are 3 to 5 inches long, and the small white flowers, in terminal panicles, are followed by blue-black fruits.

93906. LOBELIA PYRAMIDALIS Wall. Campanulaceae.

No. 28932. Variety *seguini*. A widely branched herbaceous plant 2 to 7 feet high, found between 3,000 and 9,000 feet altitude in the Himalayan Mountains. The linear leaves are glabrous, and the purple-rose or whitish flowers are produced in many-flowered racemes.

For previous introduction see 48271.

93907. LOBELIA SESSILIFOLIA Lamb. Campanulaceae.

No. 28966. A perennial herb about 1 foot high, with broadly ovate serrate leaves and violet-blue flowers. It is native to northeastern Asia and Japan.

93908 to 93911. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

93908. LONICERA ADENOPHORA Franch.

No. 28398. A shrub 6 to 10 feet high with ovate ciliate leaves 2 to 3 inches long and purple flowers. It is native to Yunnan Province, China.

93909. LONICERA HENRYI Hemsl. **Henry honeysuckle.**

No. 29019. A vine, native to western China, with long dark-green evergreen leaves and axillary clusters of odorless flowers which are rose colored when they first open, but soon become orange red.

For previous introduction see 48310.

93910. LONICERA ORESBIA W. W. Smith.

No. 29033. A small shrub, native to Yunnan, resembling *L. serpyllifolia* with obovate leaves one-half inch long and tubular flowers one-half inch long covered with white wool.

93911. LONICERA SYRINGANTHA MINOR Maxim.

No. 28589. A dwarf honeysuckle which differs from the type in having smaller leaves and flowers.

93912. LYSIMACHIA BARYSTACHYS Bunge. Primulaceae. **Loosestrife.**

No. 28466. A perennial herb, native to China, with simple stems, scattered alternate linear-oblong leaves, and dense terminal spikes, at first nodding, of white flowers.

93913. MALUS THEIFERA Rehder. Malaceae. **Tea crab.**

No. 28368. A spreading tree up to about 25 feet high, with smooth dark-gray bark. The fragrant white or pinkish flowers, about 2 inches across, are in clusters of three to seven, and the fruits, about half an inch in diameter, are greenish yellow with red cheeks. A floriferous and handsome crab apple, native to China and the Himalayas.

For previous introduction see 77854.

93914. MECONOPSIS sp. Papaveraceae.

No. 28388.

93915. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. Papaveraceae. **Yellow Chinese-poppy.**

No. 28394. A perennial herb, 1 to 2 feet high, bearing rich golden-yellow flowers. It is found in alpine meadows at 13,000 feet altitude in southwestern Szechwan.

For previous introduction see 80369.

93871 to 93970—Continued.

93916. MELIOSMA PUNGENS (Wall.) Walp. Sabiaceae.

No. 28992. A small tree, native to the subtropical Himalayas in India, with the branchlets and inflorescence covered with rusty down. The coriaceous leaves, 5 to 9 inches long, are oblanceolate with coarsely serrate margins, and the inconspicuous small flowers are in large spreading panicles.

93917. PARNASSIA DELAVAYI Franch. Saxifragaceae.

No. 28537. A perennial herb, with stems about 8 inches high and a thick rhizome. The basal leaves are long stemmed deeply cordate round or reniform and nearly 2 inches across, while the stem leaves are round and clasping. The white flowers are about half an inch long. It is native to Yunnan, China.

93918. PEDICULARIS INTEGRIFOLIA Hook. f. Scrophulariaceae.

No. 28611. An alpine perennial, native to Sikkim, India, with a stout rootstock and ascending stems 4 to 6 inches high. The leaves are crowded, narrowly linear, pubescent, and about 2 inches long. The dark-purple flowers are in oblong capitate spikes.

For previous introduction see 80200.

93919. PEDICULARIS RHODOTRICHA Maxim. Scrophulariaceae.

No. 28525. A slender perennial herb from western China, with linear-oblong pinnatifid leaves 1 inch or more long and rose-pink flowers, nearly 1 inch across, in short few-flowered racemes.

93920. PHLOMIS ROTATA Benth. Menthaceae.

No. 28592. A stemless plant with a rosette of thick coriaceous orbicular crenate leaves 3 to 6 inches across, densely tomentose beneath, suddenly contracted into tomentose petioles half an inch broad. The small flowers are in whorls on short peduncles, forming dense heads, 1 to 2 inches in diameter, in the center of the rosette of leaves, and are covered with white hairs. It is native to the alpine slopes of the Himalayas in India.

93921 and 93922. PIPTANTHUS CONCOLOR YUNNANENSIS Stapf. Fabaceae.

A shrub 3 to 12 feet high, with olive-green glabrous branchlets and dull dark-green trifoliolate leaves of lanceolate leaflets 2 to 3 inches long, native to northwestern Yunnan, China. The golden-yellow pea-shaped flowers, 1 inch long, are in terminal clusters and form a pleasing contrast to the dark leaves.

93921. No. 28392. **93922.** No. 29018.

93923. PLEUROSPERMUM sp. Apiaceae.

No. 28541.

93924. POTENTILLA ERIOCARPA Wall. Rosaceae.

No. 28625. A perennial herb with a stout rootstock from which arise branches 4 to 10 inches long, densely clothed with imbricating woolly stipular sheaths. From the tips of these branches grow the slender suberect flowering stems bearing thin 3-lobed and incised leaves about 1 inch long and solitary yellow flowers 1 to 2 inches across. It is native to northern India.

93871 to 93970—Continued.

93925 to 93933. PRIMULA spp. Primulaceae. Primrose.

93925. PRIMULA BEESIANA Forrest.

No. 28429. A remarkable free-flowering and hardy Chinese primula found growing close to the snow line in the mountainous parts of Yunnan. Under favorable circumstances the scape rises to a height of over 3 feet and produces, in the early summer, its whorls of showy flowers, a glowing velvety purple color with conspicuous eyes.

For previous introduction see 48352.

93926. PRIMULA FLORIDA Balf. and Forr.

No. 28389. A perennial herb, native to Yunnan, with ovate leaves, covered with white meal, spreading flat on the ground. The scape bears an umbel of short-stalked, purple-blue flowers with mealy calyxes.

93927. PRIMULA LITTONIANA ROBUSTA Forrest.

No. 28450. A robust form with spikes up to 15 inches long of pale purplish blue flowers. It is native to the Muli region of western China.

93928. PRIMULA POISSONI Franch.

No. 28414. Said to be a variety of *P. poissoni*, which is a tall stout glabrous herbaceous perennial, native to Yunnan, China. The broad leathery ovate-oblong leaves, 9 inches long, have crisped and twisted dentate margins folded upwards on each side. The flower scape, 3 to 5 feet high, bears superposed umbels of 3 to 12 rosy flowers 1 inch across with a golden ring at the mouth.

93929. PRIMULA POLYNEURA Franch.

No. 28400. Said to be a form of *P. polyneura*, which is a perennial herb with suborbicular crenate-lobed leaves 1 to 3 inches long and scapes 4 to 16 inches tall bearing one to three umbels of purple flowers about half an inch across. It is native to central China.

93930. PRIMULA SIKKIMENSIS Hook.

No. 28422. Received as *P. pseudo-sikkimensis*, which is now considered to be a form of *P. sikkimensis* with larger and brighter canary-yellow flowers. It is native to Yunnan, China.

93931. PRIMULA SECUNDIFLORA Franch.

No. 28413. A perennial herb with ovate-oblong finely serrulate papery leaves 2 to 4 inches long, golden farinose beneath when young. The stout scape, 8 to 12 inches high, bears a 1-sided, 6-flowered to 10-flowered umbel of bright violet flowers nearly an inch across. It is native to southwestern China.

For previous introduction see 59429.

93932. PRIMULA YARGONGENSIS Petitmengin.

No. 28403. A primrose from eastern Tibet with ovate-oblong obtuse leaves 1 to 2 inches long and one to three deep rose-lilac flowers on a thick scape 4 inches high.

93933. PRIMULA VINCIFLORA Franch.

No. 28391. A perennial herb, native to China, with a short rhizome

93871 to 93970—Continued.

and thin papery oblong leaves covered with reddish glands, and all erect, or nearly so, forming a narrow erect crown. The short scapes, 6 to 9 inches high, bear solitary purple-violet vincalike flowers 1 to 2 inches across.

93934. PRUNUS UNDULATA Buch.-Ham. Amygdalaceae.

No. 28586. A small tree, native to India, with slender branches and membranous crenate-serrate leaves varying from oblong-lanceolate and 2 to 3 inches long to linear-lanceolate and much longer. The small white flowers are in slender racemes, and the globose fruits are less than a quarter of an inch in diameter.

93935. RHEUM DELAVAYI Franch. Polygonaceae.

No. 28509. A perennial herb from southwestern China with stems 6 inches to nearly a foot high, thick cordate-ovate leaves about 2 inches long, and small purple flowers.

93936 to 93939. RIBES spp. Grossulariaceae.

93936 to 93938. RIBES GLACIALE Wall.

A shrub 10 to 15 feet high, with reddish young shoots, rounded leaves, and small flowers which are maroon or purplish on the inside. The small currantlike fruits mature in July in the higher altitudes of the Himalayas where the species is native.

For previous introduction see 58637.

93936. No. 28421.

93937. No. 28618. A form with black fruits.

93938. No. 28619.

93939. RIBES sp.

No. 28580.

93940. RUBUS LUTESCENS Franch. Rosaceae.

No. 28510. A small shrub from 1 to 2 feet high, native to alpine slopes from 10,000 to 15,000 feet altitude in Yunnan, China. The leaves are small, the flowers a pale canary-yellow and the large deep orange-yellow berries are sweet and very delicious.

For previous introduction see 56369.

93941. RUBUS STANS Focke. Rosaceae.

No. 28511. An erect shrub 3 to 4 feet high, native to China. The densely pilose, ternate leaves have round serrate leaflets 1 inch long, and the axillary rose-red flowers are nearly 1 inch across.

93942. RUMEX YUNGNINGENSIS Hort. Polygonaceae.

No. 28637. A name for which a place of publication and a description have not been found.

93943 to 93945. SAUSSUREA spp. Asteraceae.

93943. SAUSSUREA LEUCOMA Diels.

No. 28943. A thistlelike herbaceous perennial, native to Yunnan, China, 4 to 9 inches high, with the leaves divided into pinnate segments. The entire plant, except the blue-purple flower heads, is densely covered with cottony white tomentum.

93871 to 93970—Continued.

93944. SAUSSUREA POOPHYLLA Diels.

No. 28527. A cespitose plant with silky hairy stems, 5 or 6 inches high, and narrow linear leaves ranging from 5 inches at the lower parts of the stems to minute leaves above. The thistlelike flower heads are white or yellowish. Native to Tibet.

93945. SAUSSUREA sp.

No. 28531.

93946. SCHEFFLERA DUMICOLA W. W. Smith. Araliaceae.

No. 29004. A shrub 12 to 20 feet high, native to Yunnan, China, with compound leaves made up of five to nine oblong-lanceolate entire leaflets 8 to 12 inches long, glaucous beneath. The small flowers are in panicles 2 feet long, and the fruits are purplish black.

93947. SENECIO sp. Asteraceae.

No. 28419.

93948. SENECIO sp. Asteraceae.

No. 28677.

93949 to 93959. SORBUS spp. Malaceae. **Mountain-ash.**

93949. SORBUS CUSPIDATA (Spach) Hedl.

No. 29044. A tree, native to northern India, with elliptic to obovate doubly-serrate simple leaves, 3 to 8 inches long, densely white tomentose beneath. The small white flowers are borne in terminal corymbs 3 to 5 inches across and are followed by reddish fruits nearly 1 inch in diameter.

93950. SORBUS EPIDENDRON Hand.-Mazz.

No. 29021. A clambering shrub, native to western China, with more or less rosulate obovate papery leaves about 4 inches long, deep green above and paler beneath. The flowers are in hemispherical corymbs about 2 inches across.

93951. SORBUS HARROWIANA (Balf. and Smith) Rehder.

No. 29015. A tree up to 40 feet high, native to China, with compound leaves made up of three to nine oblong serrulate coriaceous leaflets 8 inches long. The small white flowers, in compound terminal corymbs 6 to 8 inches across, are followed by ovoid fruits a quarter of an inch in diameter.

93952 to 93955. SORBUS KOEHNEANA C. Schneid.

A shrub up to 10 feet high, native to central China. The compound leaves are made up of 17 to 25 oblong-lanceolate sharply serrate leaflets 1 to 2 inches long, and the white flowers with brown anthers are in corymbs 2 to 4 inches across and are followed by small white berrylike fruits.

93952. No. 28369. **93954.** No. 28620.

93953. No. 28390. **93955.** No. 28621.

93956. SORBUS REHDERIANA Koehne.

No. 28656. A shrub or bushy tree 10 to 25 feet high, with ashy black branches and pinnate leaves 3 to 5 inches

93871 to 93970—Continued.

long. The terminal corymbs of white flowers, about 2 inches across, are succeeded by round flesh-pink berries. Native to southwestern China.

93957. SORBUS sp.

No. 28593.

93958. SORBUS sp.

No. 29047.

93959. SORBUS sp.

No. 29049.

93960. STRANVAESIA DAVIDIANA Decaisne. Malaceae.

No. 29025. An evergreen shrub up to 25 feet high, native to western China. The oblong to oblanceolate entire leaves are 2 to 4 inches long, with the midrib and petiole often colored red. The small white flowers are in loose corymbs 2 to 3 inches across, and the round scarlet fruits are a quarter of an inch in diameter.

For previous introduction see 62738.

93961. STROBILANTHES FORRESTII Diels. Acanthaceae.

No. 28435. A subshrubby perennial 1 to 2 feet high, with all parts except the corolla covered with glandular hairs. The ovate crenate leaves are 1 to 2 inches long, and the bright-blue flowers, 1 inch across, are borne in leafy spikes. It is native to China.

93962. STROBILANTHES VERSICOLOR Diels. Acanthaceae.

No. 28584. A perennial herb 1 to 4 feet high, with ovate serrate leaves 2 inches long and axillary pure-white to deep-blue flowers nearly 2 inches long. It is native to China.

93963. SYMPLOCOS PANICULATA Miquel. Symplocaceae. **Asiatic sweetleaf.**

No. 29032. A shrub or small tree up to 35 feet high, native to China and Japan. The obovate sharply serrulate leaves are 1 to 3 inches long, the fragrant white flowers are in panicles 2 to 4 inches long, and the bright-blue ellipsoid fruits are nearly half an inch long.

93964. TERMINALIA FRANCHETII Gagn. Combretaceae.

No. 28547. A tree or large shrub with tortuous branches, cordate-ovate obtuse leaves over 2 inches long, and greenish-yellow flowers in small erect spikes. Native to Yunnan, China.

93965. TILIA PAUCICOSTATA Maxim. Tiliaceae. **Linden.**

No. 29008. A tree with coarsely toothed ovate leaflets 2 to 4 inches long, bluish green beneath, and yellowish flowers in clusters of 7 to 15, followed by globose to pyriform slightly ribbed fruits. It is native to northern and central China.

93966. TRIOSTEUM HIMALAYANUM Wall. Caprifoliaceae.

No. 29039. A coarse hairy herbaceous perennial native to Nepal, India. The ovate leaves are connate at the base, and the greenish flowers are followed by yellow fruits in terminal racemes.

93967. VERONICA CILIATA Fisch. Scrophulariaceae. **Speedwell.**

No. 28518. A hoary-pubescent annual, 4 to 12 inches high, native to central

93871 to 93970—Continued.

Asia. The sessile ovate leaves are about 1 inch long, and the small flowers are sessile in terminal heads.

93968. VICIA CRACCA L. Fabaceae. **Cow vetch.**

No. 28929.

93969. VITIS PENTAGONA Diels and Gilg. Vitaceae. **Grape.**

No. 29003. A woody vine, native to China, with the stems and leaves reddish gray tomentose. The long-petioled papery ovate leaves are usually five angled.

93970. (Undetermined.)

No. 28370. Said to be closely related to *Briggsia forrestii*. A stemless herbaceous perennial with pale rosy purple flowers having a tinge of yellow on the lip.

93971 to 93977.

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received August 3, 1931.

93971. GARCINIA COCHINCHINENSIS (Lour.) Choisy. Clusiaceae.

No. 113. A tree with ovate-oblong leaves, small white flowers, and pear-shaped yellowish red fruits which are said to be edible. It is related to the mangosteen and is native to southeastern Asia.

For previous introduction see 89412.

93972 to 93976. LITCHI CHINENSIS Sonner (*Nephelium litchi* Cambess.). Sapindaceae. **Lychee.**

Nos. 93972 to 93974 are from the Lingnan University orchard.

93972. No. 352. *Chong Un huno.*

93973. No. 198. *Pi tez siu.*

93974. No. 192. *Kwa luk,* hanging green.

93975. No. 347. *Paat Po Hueng.* A lychee recently secured from Yatkauuen, near Towah, Honan Island.

93976. No. 205. *Shan chi.* A variety excellent as stock.

93977. RUBUS PARVIFOLIUS L. Rosaceae. **Raspberry.**

No. 332. A hardy, tropical-loving raspberry with edible red fruits which are somewhat acid, not particularly juicy, but of good flavor.

For previous introduction see 80946.

93978 and 93979. PISUM SATIVUM L. Fabaceae. **Pea.**

From Hungary. Seeds purchased from Edmund Mauthner (Ltd.), Hungarian Seed Merchants' Association, Budapest. Received August 3, 1931.

93978. *Autumn* pea. Seeds dark colored.

93979. *Sand* pea. Seeds light colored.

93980 and 93981.

From Buitenzorg, Java. Seeds presented by the 'sLands Plantentuin (Botanische Tuin). Received August 3, 1931.

93980 and 93981—Continued.

93980. CYRTOSTACHYS LAKKA Beccari. Phoenicaceae. **Palm.**

A stately and elegant palm, native to the East Indies, with a slender spineless stem crowned with a cluster of boldly arched leaves 3 to 4 feet in length. The fruits are elongate-ovoid and about half an inch long.

For previous introduction see 68115.

93981. PIGAFETTIA ELATA (Mart.) Wendl. Phoenicaceae. **Palm.**

A tall ornamental palm with a stout trunk, spiny above, and spreading pinnate foliage resembling that of the coconut. Native to the East Indies.

For previous introduction see 67903.

93982 to 93990. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Australia. Seeds presented by Dr. W. L. Waterhouse, University of Sydney, Sydney, New South Wales. Received August 3, 1931.

A collection of Australian wheats introduced for the use of department specialists.

93982. *Bena.*
93983. *Bowen.*
93984. *Cedar.*
93985. *Firbank.*
93986. *Indian F.*
93987. *Jonathan.*
93988. *Thew.*
93989. *Wandilla.*
93990. *Warren.*

93991 to 94063.

From China. Seeds collected by the Forrest Expedition, 1930–1932, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received August 4, 1931.

93991. ACTINIDIA VENOSA Rehder. Dilleniaceae.

No. 29075. A climbing shrubby plant up to 25 feet high with oval membranous leaves, short clusters of buff-yellow flowers, and small russet berries. It is native to Szechwan Province, China.

For previous introduction see 61803.

93992. BUDDLEIA MYRIANTHA Diels. Loganiaceae.

No. 29064. A shrub 6 to 10 feet high, native to Yunnan, China, with lanceolate serrulate leaves 5 to 7 inches long and panicles 10 inches long of fragrant deep-purple flowers covered with brown hairs. It is allied to *B. davidii.*

93993 and 93994. THEA PITARDII (C. Stuart) Rehder (*Camellia speciosa* Melchior). Theaceae.

A shrub 3 to 6 feet high, native to Yunnan, China, with coriaceous ovate to oblanceolate serrate leaves 2 to 4 inches long and rose-pink flowers 1 to 2 inches across.

93993. A dark-flowered form.

93994. Type.

93995. CELASTRUS sp. Celastraceae.

No. 29052. Said to be closely related to *C. loeseneri,* which is a climbing shrub with rather fleshy deciduous lanceolate leaves 5 inches long having crenate-serrate margins. The greenish-white flowers, in axillary racemes, are followed by 3-valved yellow fruits a third of an inch in diameter.

93996. CORNUS MACROPHYLLA Wall. Cornaceae.

No. 29067. A small, strikingly handsome deciduous tree 30 to 40 feet high, chiefly noteworthy for its fine foliage. The ovate or oblong leaves, often tapering to a taillike point, are 4 to 7 inches long and 2 to 3 inches wide, smooth bright green above and glaucous beneath. The numerous yellowish-white flowers are produced in somewhat rounded terminal cymes 4 to 6 inches across. Each flower is less than 1 inch in diameter and of too dull a white to be very effective.

For previous introduction see 40808.

93997. COTONEASTER MOUPINENSIS Franch. Malaceae. **Mupin cotoneaster.**

No. 29090. A shrub, native to western China, 15 to 20 feet high with spreading branches, rhombic-ovate dull-green rugose leaves 3 to 5 inches long, and many-flowered corymbs of pinkish flowers followed by ovoid, jet-black fruits a quarter of an inch in diameter.

93998. DECAISNEA FARGESII Franch. Lardizabalaceae.

No. 29063. A handsome shrub up to 15 feet high, with large pinnate leaves 3 feet long, greenish flowers in long pendulous racemes, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see 77828.

93999. DELPHINIUM sp. Ranunculaceae. **Larkspur.**

94000. DIPELTA YUNNANENSIS Franch. Caprifoliaceae.

No. 29091. A shrub 10 to 15 feet high, native to western China, with opposite entire lanceolate leaves 3 to 6 inches long and leafy racemes of 2-lipped tubular-campanulate pinkish to purple flowers having shieldlike floral bracts.

94001. EUONYMUS GRANDIFLORUS Wall. Celastraceae.

No. 29096.

For previous introduction and description see 93891.

94002. EUPTELEA PLEIOSPERMA Hook. f. and Thoms. Trochodendraceae.

No. 29086. A tree 30 to 40 feet high, native to the Tibet region, with slender-stalked red flowers in axillary fascicles, appearing before the leaves. The ovate-crenate leaves 3 to 6 inches long are glaucescent beneath and have very long-acuminate tips.

94003. HELWINGIA CHINENSIS Batal. Cornaceae.

No. 29073. A shrub 6 to 8 feet high, native to western China, with linear to ovate-lanceolate serrate leaves 6 inches long. The small greenish-white flowers are borne in clusters on the midrib of the leaves and are followed by globose berries a quarter of an inch in diameter.

94004. ILEX DELAVAYI Franch. Aquifoliaceae. **Holly.**

No. 29054. A bushy shrub with smooth grayish bark and leaves an inch or more

93991 to 94063—Continued.

long, resembling closely those of *I. crenata*. The solitary black berries are ovoid-globular. Native to Yunnan, China.

94005. JASMINUM HETEROPHYLLUM GLABRICYMOSUM W. W. Smith. Oleaceae. **Jasmine.**

No. 29100. A smooth-flowered form of this Himalayan shrub, which is said to be native to China. It is a stout shrubby strong-growing bush with shiny alternate narrowly oval leaves up to 5 inches long and a profusion of golden-yellow flowers up to one-third of an inch long which occur in compound cymes.

For previous introduction see 82371.

94006. LESPEDEZA FORMOSA (Vogel) Koehne. Fabaceae. **Purple bushclover.**

No. 29058. An erect semishrubby plant, 6 to 12 feet high, with trifoliolate leaves of oblong leaflets and racemes of rose-purple flowers. It is native to Chosen.

For previous introduction see 83481.

94007. BENZOIN CERCIDIFOLIUM (Hemsl.) Rehder (*Lindera cercidifolium* Hemsl.). Lauraceae.

No. 29087. A shrub up to 25 feet high, native to central China. The suborbicular to ovate leaves, 2 to 5 inches long, are usually entire, but may have three short acute lobes at the tip. The small flowers are followed by ovoid dark-red fruits a third of an inch long.

94008. MALUS THEIFERA Rehder. Malaceae. **Tea crab.**

No. 29095.

For previous introduction and description see 93913.

94009. PTEROCARYA FORRESTII Hort. Juglandaceae.

No. 29089. A name for which a place of publication and a description have not been found.

94010 to 94041. RHODODENDRON spp. Ericaceae.

94010.	No. 1/1931.	**94026.**	No. 17/1931.
94011.	No. 2/1931.	**94027.**	No. 18/1931.
94012.	No. 3/1931.	**94028.**	No. 19/1931.
94013.	No. 4/1931.	**94029.**	No. 20/1931.
94014.	No. 5/1931.	**94030.**	No. 21/1931.
94015.	No. 6/1931.	**94031.**	No. 22/1931.
94016.	No. 7/1931.	**94032.**	No. 23/1931.
94017.	No. 8/1931.	**94033.**	No. 24/1931.
94018.	No. 9/1931.	**94034.**	No. 25/1931.
94019.	No. 10/1931.	**94035.**	No. 26/1931.
94020.	No. 11/1931.	**94036.**	No. 27/1931.
94021.	No. 12/1931.	**94037.**	No. 28/1931.
94022.	No. 13/1931.	**94038.**	No. 29/1931.
94023.	No. 14/1931.	**94039.**	No. 30/1931.
94024.	No. 15/1931.	**94040.**	No. 31/1931.
94025.	No. 16/1931.	**94041.**	No. 32/1931.

94042. RHODODENDRON LEPTOTHRIUM Balf. and Forr. Ericaceae.

A shrub 1 or 2 feet high, with thin lanceolate leaves 2 or 3 inches long and solitary deep-rose crimson-spotted flowers nearly an inch long. Native to Yunnan, China.

94043. RHUS VERNICIFLUA Stokes. Anacardiaceae. **Lacquer-tree.**

No. 29057. A tree 25 to 40 feet high, cultivated in Hupeh Province, between 3,000 and 7,000 feet altitude, for its sap which when properly prepared makes a very good varnish with a hard lacquer-like finish. The sap is poisonous to some people. The branches are more or less whorled and the leaves, imparipinnate, five to many foliolate, are from 1 to nearly 3 feet long and clustered at the ends of the branches. The small greenish-white flowers are borne in large axillary panicles.

For previous introduction see 60224.

94044. ROSA OMEIENSIS Rolfe. Rosaceae. **Mount Omei rose.**

No. 29053. A shrub 12 to 15 feet high, native to southwestern China at 13,000 feet altitude. The bush branches from the base, and the young branches, broadly winged, are carmine. The flowers are white.

94045. SCHIZANDRA CHINENSIS (Turcz.) Baill. Magnoliaceae.

No. 29065. A woody vine, native to northeastern China, with shining dark-green oval leaves and clusters of coral-colored berries.

For previous introduction see 81653.

94046. SENECIO sp. Asteraceae.

94047. SORBUS sp. Malaceae. **Mountain-ash.**

No. 29092.

94048. VACCINIUM sp. Vacciniaceae.

No. 29078.

94049. VIBURNUM CORDIFOLIUM Wall. Caprifoliaceae.

No. 29055. A large subtropical shrub with heart-shaped sharply toothed leaves and small dense corymbs of white flowers. Native to the temperate Himalayas.

94050. VIBURNUM sp. Caprifoliaceae.

94051. (Undetermined.)

No. 33/1931.

94052. (Undetermined.)

No. 34/1931.

94053. (Undetermined.)

No. 35/1931.

94054. (Undetermined.)

No. 36/1931.

94055. (Undetermined.)

No. 37/1931.

94056. (Undetermined.)

No. 38/1931.

94057. (Undetermined.)

No. 39/1931

94058. LYTHRUM SALICARIA L. Lythraceae.

No. 40/1931.

94059. (Undetermined.)

No. 41/1931.

93991 to 94063—Continued.

94060. (Undetermined.)

No. 42/1931.

94061. (Undetermined.)

No. 43/1931.

94062. (Undetermined.)

No. 44/1931.

94063. (Undetermined.)

94064. LITCHI PHILIPPINENSIS Radlk. Sapindaceae.

From the Philippine Islands. Seeds presented by the Bureau of Science, Department of Agriculture and Natural Resources, Manila. Received August 6, 1931.

For previous introduction and description see 93763.

94065. SOLANUM MURICATUM Ait. Solanaceae. **Pepino.**

From the Madeira Islands. Plants presented by A. S. Noronha, Nusen Regional, Funchal. Received August 6, 1931.

A subshrub, 2 to 3 feet high, indigenous to Peru, which is cultivated as far south as northern Chile. The sweet juicy egg-shaped yellow fruits, 4 to 6 inches long, are highly prized by the natives and are sold in the markets.

For previous introduction see 89547.

94066. LITCHI CHINENSIS Sonner (*Nephelium litchi* Cambess.). Sapindaceae. **Lychee.**

From India. Plant purchased from Frederico Verela, Calcutta. Received March 22, 1929. Numbered in August, 1931.

Said to be a rose-scented form of the lychee, which is a round-topped tree 30 to 40 feet high with glossy light-green foliage. The globular fruits, 1 inch in diameter, are deep pink when ripe, turning brown when dried, and are borne in clusters of 3 to 20.

94067. AGROSTIS sp. Poaceae. **Dryland brown top.**

From New Zealand. Seeds presented by Doctor Levy, Field Division and Plant Research Station, Palmerston North. Received August 7, 1931.

A strain of the ordinary New Zealand brown-top (*Agrostis tenuis*), which is decidedly more winter-hardy, under New Zealand conditions, than the ordinary brown-top.

94068. CEPHALOCEREUS FLUMINENSIS (Miquel) Britt. and Rose. Cactaceae. **Cactus.**

From Brazil. Cuttings presented by P. Campos Porto, Ministerio da Agricultura, Industria e Comercio, Rio de Janeiro. Received August 6, 1931.

A cactus, native to Brazil, with large cylindrical stems several inches thick, erect, spreading, or pendent. The stems are covered with white hairs intermixed with long yellow bristles, and the small red or purple fruits are almost hidden in the white wool of the fruiting heads.

94069. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From the Union of South Africa. Plants presented by D. Gunn, Port Elizabeth. Received April 26, 1920. Numbered in August, 1931.

Natal. The fruit of the Natal pineapple as grown at Coconut Grove in southern Florida is rather small, usually not over 6 or 7 inches long by nearly 5 inches in diameter. The exterior is somewhat rough and of a bright yellow when ripe. In quality the variety ranks high, the flesh being sweet, mild in flavor, and almost free from fiber; the core is small. The chief disadvantage of the Natal is its small size, some fruits being too small for market. The variety is outstanding in the large number of suckers, often a dozen or more, it produces at the base of the plant immediately after fruiting.

94070 to 94073.

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received August 4, 1931.

94070. ATALANTIA sp. Rutaceae.

No. 168. From seed obtained through the Institute Scientifique, Saigon.

94071. ATALANTIA sp. Rutaceae.

No. 220. From the Botanical Garden, Saigon. This plant is propagated by cuttings, and it is very difficult to root.

94072. CITRUS MEDICA L. Rutaceae. **Citron.**

No. 128. *Wagner* citron from French Indo-China; grafted on lemon.

94073. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

No. 110. Seedling plants of the *Caibe* orange from Indo-China.

94074. ARACHIS HYPOGAEA L. Fabaceae. **Peanut.**

From Uruguay. Seeds presented by Eduardo P. Brito, Facultad de Agronomia, Cátedra de Agricultura, Montevideo. Received August 21, 1931.

The Asiatic variety of peanut.

94075 to 94086.

From India. Seeds presented by the Curator, Lloyd Botanic Garden, Darjeeling, through Ralph A. Fenton, Portland, Oreg. Received August 4, 1931.

94075. DAPHNE PAPYRACEA Wall. (*D. cannabina* Wall.). Thymelaeaceae.

A shrub up to 8 feet high, native to the temperate slopes of the Himalayas in India. The thinly coriaceous oblanceolate leaves are 2 to 4 inches long, and the fragrant yellowish white flowers, half an inch long, are in terminal heads.

94076. DAPHNE INVOLUCRATA Wall. Thymelaeaceae.

A lax shrub up to 20 feet high, with thin oblong-lanceolate leaves 3 to 6 inches long and silky white fragrant flowers in long-stemmed heads. It is native to the Sikkim region in India.

94077. MEIBOMIA FLORIBUNDA (D. Don.) Kuntze. Fabaceae.

A woody thickly pubescent Himalayan plant with very copious axillary and terminal racemes of red flowers.

For previous introduction see 86684.

94075 to 94086—Continued.

94078. MEIBOMIA HETEROCARPA (L.) Kuntze. Fabaceae.

An erect or suberect undershrub found throughout the Himalayas and in Burma. All of the bushy species of this genus are said to contain good fibers, used in some cases for paper making.

For previous introduction see 47723.

94079. PYRULARIA EDULIS (Wall.) DC. Santalaceae.

A medium-sized thorny tree native to the tropical slopes of the Himalayas up to an altitude of 5,000 feet. The leaves are 3 to 7 inches long, rather fleshy, oblong, with entire margins. The staminate flowers are in racemes, and the pistillate are solitary, producing edible pear-shaped drupes 2 inches long.

For previous introduction see 46095.

94080 to 94082. TERMINALIA spp. Combretaceae.

94080. TERMINALIA BELLERICA (Gaertn.) Roxb.

The small round fruits of this handsome tropical Indian tree have been exported from India for tanning purposes under the name myrobalans. The yellowish-gray wood is used for general construction. The tree also has merit as a shade tree for avenues, with its huge buttressed trunk and long horizontal branches.

For previous introduction see 68866.

94081. TERMINALIA MYRIOCARPA Huerck and Muell. Arg.

A very valuable timber tree of northeast Assam. It reaches a height of 80 to 100 feet, is deciduous, and fruits in January and February before the leaves appear.

For previous introduction see 53470.

94082. TERMINALIA TOMENTOSA (Roxb.) Wight and Arn.

A large tree, 80 to 100 feet tall, with hard, leathery leaves 5 to 9 inches long and erect terminal racemes of dull-yellow flowers. In India the tree appears to thrive best in heavy binding soils, and the dark-brown wood is valued for general construction purposes.

For previous introduction see 66243.

94083. TRICHOSANTHES CUCUMERINA L. Cucurbitaceae.

An annual vine with 5-lobed, broadly cordate leaves 2 to 4 inches across and lemonlike fruits 1 to 3 inches long. It is native to India and is used in native medicine.

94084. TURPINIA POMIFERA (Roxb.) DC. Staphyleaceae.

A small tree with odd-pinnate leaves 1 to 2 feet long, made up of three to nine ovate crenate-serrate leaflets 3 to 8 inches long. The small yellowish flowers are in terminal panicles 6 to 10 inches long and are followed by fleshy green-yellow or red subglobose fruits 2 inches in diameter. It is native to the subtropical slopes of the Himalayas in India.

94085. STEPHANIA ROTUNDA Lour. Menispermaceae.

A large climber, native to the northwestern Himalayas, with tuberous roots, large peltate leaves up to 7 inches in width, and axillary umbels of yellow flowers.

For previous introduction see 47804.

94086. WALLICHIA DENSIFLORA Mart. Phoenicaceae. **Palm.**

A palm with a very short stem or, sometimes, stemless, found throughout the tropical Himalayas from Kumaon eastward. The leaves are 8 to 10 feet long, the spathes are purple, and the male flowers are yellow while the female flowers are purplish. The dull-purple fruits are about half an inch long. The leaves are sometimes used for fodder and also for thatching.

For previous introduction see 47858.

94087 and 94088. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

From the Union of South Africa. Seeds presented by Dr. Raimond H. Marloth, Department of Agriculture, Pretoria. Received August 7, 1931.

94087. An early variety with long purple fruits.

94088. A variety with round purple fruits.

94089 to 94094.

From Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received August 10, 1931.

94089. CARYOPHYLLUS AROMATICUS L. Myrtaceae. **Clove.**

A small tree, 12 to 15 feet high, native to the Molucca Islands, now cultivated widely in tropical regions for the dried unopened flower buds, which constitute the cloves of commerce.

For previous introduction see 89026.

94090. ONCOSPERMA FASCICULATUM Thwaites. Phoenicaceae. **Palm.**

The *Katu-kitul* palm of Indo-Malaya is one of the graceful cluster palms which make magnificent groups 40 to 60 feet high in the Peradeniya Gardens. The stems are spiny and make it unsuitable for small gardens, but useful for large parks.

For previous introduction see 88674.

94091. ONCOSPERMA FILAMENTOSUM Blume. Phoenicaceae. **Palm.**

The *Nibung* is a cluster palm of great beauty which rises to a height of 50 feet and waves its pinnate leaves in the slightest breeze. Like its relative, *Oncosperma fasciculatum,* it is a spiny palm and therefore not suited for small gardens. The great clumps of this palm are wonderfully effective in a proper setting.

For previous introduction see 88675.

94092. PHOENICOPHORIUM BORSIGIANUM (Koch) Stuntz (*P. sechellarum* Wendl.) Phoenicaceae. **Palm.**

This noble palm, famous for its beauty, is indigenous to the Seychelles Islands. The mature palm is wholly destitute of spines, whereas in the young state the deep orange-red petioles are clothed with black needlelike spines 1 to 3 inches long. The young leaves are orange beneath and

94089 to 94094—Continued.

mottled with orange-brown spots above. The difference between the young and the mature plants is so great that a person unfamiliar with the palm would consider them different species. The flower spike is from 3 to 6 feet in length, divided into numerous slender branches swollen at the base and densely covered above with yellow flowers each about a quarter of an inch in diameter.

For previous introduction see 36486.

94093. ACTINORHYTIS CALAPPARIA Wendl. and Drude. Phoenicaceae. **Palm.**

A robust palm 40 feet high with a smooth stem conspicuously ringed, large pinnate leaves 9 feet long and 6 feet wide, and a large pendulous cluster of small flowers followed by ovoid red fruits 3 inches long. Native to the East Indies.

For previous introduction see 88861.

94094. SCHLEICHERA TRIJUGA Willd. Sapindaceae.

Ceylon oak. A handsome shade tree which resembles a European evergreen oak. The small fruits are edible and slightly acid.

For previous introduction see 66659.

94095 to 94098.

From Java. Seeds presented by the Curator, Botanic Gardens, Buitenzorg. Received August 11, 1931.

94095. CASSIA TIMORIENSIS DC. Caesalpiniaceae.

A rather low tree with slender downy branches, pale-green leaves up to 9 inches long, bright-yellow flowers, and thin glossy flexible pods sometimes 6 inches long. The tree is distributed throughout the Malay Archipelago and the Philippines.

For previous introduction see 72433.

94096. CLERODENDRUM MACROSIPHON Hook. f. Verbenaceae.

An erect shrub with opposite oblanceolate notched or pinnatifid leaves and terminal cymes of tubular pure white flowers 4 to 5 inches long with red stamens 2 inches long. It is native to tropical Africa.

For previous introduction see 90871.

94097. PHOENIX PUSILLA Gaertn. Phoenicaceae. **Palm.**

A dwarf palm about 4 feet high, with pinnate leaves having spiny petioles and dark-green sword-shaped leaflets, also black fruits. The stem is said to contain a farinaceous pith. It is native to Ceylon.

For previous introduction see 93415.

94098. SALAKKA EDULIS Reinw. (*Zalacca edulis* Schult.). Phoenicaceae. **Palm.**

A stemless palm with pinnate leaves having long, often serrate, prickles and linear-lanceolate long-pointed leaflets 1 to 2 feet long and whitish beneath. The brown scaly pear-shaped fruits are 2 to 3 inches long and contain an acid edible pulp. It is native to the Malay Archipelago.

94099. PYRACANTHA CRENULATA ROGERSIANA A. B. Jacks. Malaceae. **Firethorn.**

Plants growing at the Chico Plant Introduction Garden, Chico, Calif., selected out of F. P. I. 55996. Numbered in August, 1931.

Usually a shrub, native to southwestern China, with evergreen oblanceolate unequally serrulate leaves 1 to 2 inches long. The glabrous corymbs of small white flowers are followed by reddish-orange fruits about one-third of an inch in diameter.

94100 to 94150.

From China. Seeds collected by the Forrest Expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received August 6, 1931.

94100. PITTOSPORUM FLORIBUNDUM Wight and Arnott. Pittosporaceae.

A handsome subtropical tree with a short straight trunk, spreading branches, and numerous yellowish flowers in terminal panicles. The tree has light-colored strong tough wood and yields an aromatic resin or oleo-resin having very adhesive properties. The tree is native to the outer Himalayas, ascending to 3,500 feet.

For previous introduction see 75964.

94101 to 94150. RHODODENDRON spp. Ericaceae.

94101 to 94104. RHODODENDRON ADENOPHORUM Balf. and Smith.

A shrub up to 7 feet high with thick lanceolate leaves up to 5 inches long and rose-colored flowers over an inch long in lax umbels. Native to Yunnan, China.

94101. No. 29256. **94103.** No. 29313.

94102. No. 29312. **94104.** No. 29314.

94105 to 94107. RHODODENDRON BALFOURIANUM AGANNIPHOIDES Diels.

A shrub 4 to 9 feet high, with leathery oblong or narrowly ovate leaves 2 to 3 inches long, the lower surface of which is covered with a spongy indumentum, and pale-rose fleshy flowers an inch across, with crimson markings. Native to Yunnan.

94105. No. 29244. **94107.** No. 29264

94106. No. 29263.

94108. RHODODENDRON BEESIANUM Diels.

No. 29247. A shrub 15 to 20 feet high, with leathery purplish-green narrowly oblanceolate leaves about 6 inches long and deep rich-rose flowers up to 2 inches across. Allied to *R. delavayi* Franch. Native to Yunnan.

94109 and 94110. RHODODENDRON CLIVICOLUM Balf. and Smith.

A shrub 3 to 5 feet high, with thick leathery oblong-elliptic leaves about 1 inch long and flowers with a white limb and yellow tube, in terminal headlike umbels. Native to Yunnan.

94109. No. 29267. **94110.** No. 29283.

94111. RHODODENDRON CROCEUM Balf. and Smith.

No. 29322. A shrub up to 22 feet high, with somewhat papery oblong

94100 to 94150—Continued.

leaves up to 5 inches long and flesh-yellow red-spotted flowers over 1 inch long in racemose umbels. Native to Yunnan.

94112 and 94113. RHODODENDRON CUCULLATUM Hand.-Maz.

A stout shrub about 10 feet high, with rigid lanceolate leaves up to 4 inches long and white flowers flushed pink in umbels of 15 to 20 flowers. Native to Szechwan, China.

94112. No. 29257. **94113.** No. 29317.

94114 and 94115. RHODODENDRON GLOBIGERUM Balf. and Forr.

A stout shrub about 2 feet high, with rigid leathery oblong-oval leaves 2 to 3 inches long and white flowers, spotted with crimson, an inch long, in compact umbels. Native to Szechwan.

94114. No. 29130. **94115.** No. 29258.

94116 and 94117. RHODODENDRON HEMITRICHOTUM Balf. and Forr.

A small twiggy bush nearly 3 feet in height, with very thin interlacing profusely floriferous hairy branches. The leathery narrow-oblong leaves are an inch long, and the pale rose flowers are in small umbels. Native to southwestern China.

94116. No. 29248. **94117.** No. 29273.

94118. RHODODENDRON INTRICATUM Franch.

No. 29266. A bushy plant with dark-green, oval-rounded leaves, white scaly beneath and half an inch long, and purplish flowers two-fifths inch across, in twos and threes. Native to Szechwan, China.

94119. RHODODENDRON MIMETES SIMULANS Tagg. and Forr.

No. 29281. A shrub 3 to 7 feet high, with thick short branches, leathery cordate-elliptic leaves 3 to 4 inches long with a splitting indumentum, and white, rose-ringed flowers in a lax umbel. Native to Szechwan.

94120. RHODODENDRON MULIENSE Balf. and Forr.

No. 29249. A dwarf, small-leaved shrub less than 3 feet high, native to Szechwan, China. The bright-yellow flowers, half an inch long, are in compact terminal umbels.

94121. RHODODENDRON EDGARIANUM Rehd. and Wils.

No. 29268. A small-leaved bushy fastigiate plant with lilac-colored flowers nearly half an inch long in terminal pairs. Native to Yunnan.

94122 and 94123. RHODODENDRON RADINUM Balf. and Smith.

A dwarf bushy shrub 1 to 2 feet high, native to Yunnan, China. The long-stemmed leaves are about 1 inch long, and the rosy-white flowers, half an inch long, are in small dense umbels.

94122. No. 29250. **94123.** No. 29271.

94124 to 94129. RHODODENDRON SPHAEROBLASTUM Balf. and Forr.

A shrub about 5 feet high, with thick leathery oval-oblong leaves up

94100 to 94150—Continued.

to 6 inches long and white, pink-tinged flowers in racemose umbels. Native to Szechwan, China.

94124. No. 29245. **94127.** No. 29262.

94125. No. 29246. **94128.** No. 29320.

94126. No. 29252. **94129.** No. 29321.

94130. RHODODENDRON TELMATEIUM Balf. and Smith.

No. 29269. A low shrubby plant up to 3 feet high, with oblong or narrowly lanceolate leaves about half an inch long and solitary rose-purple flowers half an inch long. Native to Yunnan, China.

94131. RHODODENDRON YUNNANENSE Franch. **Yunnan rhododendron.**

No. 29323. A low shrub, 6 feet or less high, with narrowly elliptic, somewhat hairy leaves and few-flowered clusters of broadly funnel-shaped flowers, white, with the upper lobes spotted blood red. Native to Yunnan, China.

94132. RHODODENDRON sp.

No. 29131.

94133. RHODODENDRON sp.

No. 29242.

94134. RHODODENDRON sp.

No. 29243.

94135. RHODODENDRON sp.

No. 29251.

94136. RHODODENDRON sp.

No. 29253.

94137. RHODODENDRON sp.

No. 29254.

94138. RHODODENDRON sp.

No. 29259.

94139. RHODODENDRON sp.

No. 29260.

94140. RHODODENDRON sp.

No. 29278.

94141. RHODODENDRON sp.

No. 29280.

94142. RHODODENDRON sp.

No. 29282.

94143. RHODODENDRON sp.

No. 29325.

94144. RHODODENDRON sp.

No. 29326.

94145. RHODODENDRON sp.

No. 29327.

94146. RHODODENDRON sp.

No. 29328.

94147. RHODODENDRON sp.

No. 29329.

94148. RHODODENDRON sp.

No. 29331.

94100 to 94150—Continued.

94149. RHODODENDRON sp.

No. 29333.

94150. RHODODENDRON sp.

No. 29341.

94151 to 94173.

From Japan. Seeds arranged for by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry; collected near Tokyo and sent by N. Suyetake through the United States Consulate, Tokyo. Received August 7, 1931.

94151. CYTISUS SCOPARIUS (L.) Link. Fabaceae. **Scotch broom.**

No. 7970. Japanese name, *Enishida.*

94152. ILEX INTEGRA Thunb. Aquifoliaceae. **Holly.**

No. 7968. An evergreen Japanese shrub or tree up to 40 feet in height, with oval or oblong, usually entire, leaves 2 to 3 inches long and globular or ovoid red berries.

For previous introduction see 67361.

94153 to 94173. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

Nos. 94153 to 94157 are from the Naganoken Agricultural Experiment Station.

94153. No. 7945. *Takiya.*

94154. No. 7946. *Mejiro No. 1,* white eye No. 1.

94155. No. 7947. *Akazaya,* red pod.

94156. No. 7948. *Rikuu No. 22.*

94157. No. 7949. *Ginpaku,* silver white.

94158. No. 7950. *Karihatakiya.* From the Niigataken Agricultural Experiment Station.

Nos. 94159 to 94162 are from the Kagoshimaken Agricultural Experiment Station.

94159. No. 7951. *Kiizaya,* yellow pod.

94160. No. 7952. *Wase kindaizu,* early gold soybean.

94161. No. 7953. *Kindaizu,* gold soybean.

94162. No. 7954. *Shirokuch No. 1,* white mouth No. 1.

Nos. 94163 to 94173 are from the Chibaken Agricultural Experiment Station.

94163. No. 7955. *Aogaridaizu.* Used as a green manure.

Nos. 94164 to 94168 are used as green manure or for forage purposes.

94164. No. 7956. *Kurosengokukinai No. 4,* black 5,000 bushels Kindi No. 4.

94165. No. 7957. *Kurosengokukinai No. 1,* black 5,000 bushels Kindi No. 1.

94166. No. 7958. *Chasengoku No. 82,* brown 5,000 bushels No. 82.

94167. No. 7959. *Chasengoku No. 12,* brown, 5,000 bushels No. 12.

94151 to 94173—Continued.

94168. No. 7960. *Chasengoku No. 9,* brown 5,000 bushels No. 9.

Nos. 94169 to 94173 are used for bean curd, miso, shoyu, and general cooking.

94169. No. 7961. *Hakka,* white flower.

94170. No. 7962. *Sennarikimusume,* bunching maiden.

94171. No. 7963. *Bobiki,* waxed.

94172. No. 7964. *Kimusume,* maiden.

94173. No. 7965. *Keburui,* shake hair.

94174 and 94175.

From the Union of South Africa. Seeds purchased from De Mole & Kisch, Maritzburg, Natal Province. Received August 14, 1931.

94174. ARISTEA ECKLONI Baker. Iridaceae.

A small herbaceous perennial with a rosette of linear leaves 6 to 18 inches long and flattened flower stems 12 to 15 inches high. The bright blue flowers, one-third inch long, are borne in clusters arranged in a lax corymbose panicle with ascending branches. It is native to southern Africa.

For previous introduction see 66262.

94175. ZANTEDESCHIA REHMANNI Engl. Araceae. **Calla.**

A dwarf perennial, native to southern Africa, with long-petioled lanceolate unequal-sided leaves dotted with light green and white. The spathes of this form are said to be pale clear pink.

94176 to 94201.

From the Philippine Islands. Seeds presented by the Director of Forestry, Department of Agriculture and Natural Resources, Manila. Received August 20, 1931.

94176. ADENANTHERA PAVONINA L. Mimosaceae. **Redbead.**

A handsome deciduous tree, native to the East Indies, with spreading branches. The bipinnate leaves have 2 to 6 pairs of pinnae, each pinna having 2 to 12 pairs of oval obtuse glabrous leaflets. The small white and yellow fragrant flowers, borne in racemes, are followed by glossy scarlet biconvex seeds.

For previous introduction see 51809.

94177. ADONIDIA MERRILLII Beccari. Phoenicaceae. **Palm.**

Bonga de China or *bonga de Jolo.* A medium-sized palm with graceful, somewhat-curved pinnate leaves, resembling the common betel-nut palm, but not so tall. The crimson fruits, less than an inch long, are borne just below the leaves. In Manila this palm is grown as an ornamental.

For previous introduction see 88868.

94178. ALBIZZIA ACLE (Blanco) Merr. Mimosaceae.

A large tree up to 100 feet high and 3 to 4 feet in diameter, native to the Philippine Islands. The bipinnate leaves have two pinnae each bearing three to six pairs of ovate leaflets 2 to 6 inches long, and the yellow-green flowers, borne

94176 to 94201—Continued.

in small heads, are followed by flat pods 10 to 15 inches long, constricted between the seeds.

94179. ALBIZZIA PROCERA (Roxb.) Benth. Mimosaceae.

A tall handsome tropical tree, often 60 to 80 feet high, with yellowish or greenish-white bark, large compound leaves, and terminal panicles of yellowish-white flowers. In Burma, Bengal, and southern India, where this tree is native, the brown heartwood is used for making agricultural implements.

For previous introduction see 61594.

94180. AMERIMNON SISSOO (Roxb.) Kuntze (*Dalbergia sissoo* Roxb.). Fabaceae.

A large deciduous tree native to tropical and subtropical regions of the lower Himalayas. It is highly esteemed for the strong elastic durable wood which seasons well and does not warp or split. The thin layer of sapwood is white, while the heartwood is brown with darker longitudinal veins and is very hard.

For previous introduction see 55411.

94181. BAUHINIA MALABARICA Roxb. Caesalpiniaceae.

A small erect bushy tree, with thick rigid deeply bifid somewhat heart-shaped leaves 2 to 3 inches long. The small white flowers are in dense sessile axillary clusters. The rather turgid, straight, firm, narrow pods are a foot long. Its native habitat is the mountainous country of northeastern India.

For previous introduction see 87520.

94182. CAESALPINIA SAPPAN L. Caesalpiniaceae. **Sappan.**

A shrubby leguminous tree, native to India and the Malay Archipelago, which bears showy yellow flowers. The wood yields a red dye, and the bark is used for tanning. It is said to be an excellent hedge plant and to endure rather poor dry soils.

For previous introduction see 88108.

94183. CANANGIUM ODORATUM (Lam.) Baill. Annonaceae. **Ylang-ylang.**

A large quick-growing tree, 60 to 80 feet high, native to the Philippines, Guam, and Java. The large greenish-yellow flowers are strongly scented and yield by distillation the popular perfume, ylang-ylang.

For previous introduction see 51811.

94184. CARLUDOVICA PALMATA Ruiz and Pav. Cyclanthaceae.

A stemless plant, native to Peru, with palmately divided, palmlike leaves about 2 feet across, on petioles 4 to 6 feet high. The leaves are used for making Panama hats.

94185. CASSIA JAVANICA L. Caesalpiniaceae.

A small tree with gorgeous pink flowers over 2 inches across, borne in large clusters during February.

For previous introduction see 67542.

94176 to 94201—Continued.

94186. CEDRELA ODORATA L. Meliaceae. **Cigarbox cedar.**

A tree, sometimes 100 feet tall, with handsome bright-green compound leaves 10 to 20 inches long. It is native to the West Indies and is the tree which produces the cigar-box wood of Cuba.

For previous introduction see 59302.

94187. ERYTHRINA FUSCA Lour. Fabaceae. **Coraltree.**

A large handsome tropical shrub up to 8 feet high, with prickly brown bark, unarmed compound narrow leaflets, and terminal racemes of brown-red flowers. Native to French Indo-China.

For previous introduction see 72436.

94188. ERYTHRINA VARIEGATA ORIENTALIS (L.) Merr. (*E. lithosperma* Blume). Fabaceae. **Dapdap.**

A moderate-sized spineless leguminous tree, native to the East Indies. It is of very rapid growth, with trifoliolate leaves and red flowers. In Ceylon the tree is used to shade crop plants, and also the foliage is lopped for use as green manure.

For previous introduction see 81923.

94189. FLACOURTIA RUKAM Zoll. and Mor. Flacourtiaceae.

A handsome unarmed Malayan drought-resistant tree with leathery leaves and edible berries, about the size of cherries, which are said to make excellent preserves.

For previous introduction see 80770.

94190. GNETUM INDICUM (Lour.) Merr. (*G. funiculare* Blume). Gnetaceae.

Bulso. A tropical woody vine with brick-red fruits in bunches like grapes, each containing a nut which when roasted has the flavor of a chestnut. Native to the Philippines.

For previous introduction see 81494.

94191. HETEROSPATHE ELATA Scheff. Phoenicaceae. **Palm.**

A tall unarmed palm with a straight slender stem and long pinnate leaves, growing in protected situations and where the rainfall is evenly distributed. It is one of the most attractive and graceful palms and will make a good plant for the conservatory and possibly a good house plant.

For previous introduction see 89203.

94192. HURA CREPITANS L. Euphorbiaceae. **Sandboxtree.**

Monkey dinner-bell. An ornamental tree, native to the American Tropics, which attains a height of 100 feet. The broad-ovate repand-dentate poplarlike leaves are on long petioles. The small reddish flowers are followed by deeply ribbed capsules 3 inches wide and over an inch thick, which explode with a loud noise when ripe and throw the seeds many feet. Cattle eat the falling leaves and thrive on them. The lumber is used for tanks, vats, etc.

For previous introduction see 35592.

94193. INTSIA BIJUGA (Colebr.) Kuntze (*Afzelia bijuga* Gray). Caesalpiniaceae. **Ipil.**

94176 to 94201—Continued.

A tall tree 100 feet or more in height, with fragrant white and reddish flowers borne in large conspicuous clusters. The wood is valued as building material.

For previous introduction see 63772.

94194. LAGERSTROEMIA SPECIOSA (Muench.) Pers. (*L. flosreginae* Retz.). Lythraceae. **Queen crapemyrtle.**

A tree 50 to 60 feet high, with leaves 4 to 8 inches long and large panicles of flowers which change in color from rose to purple from morning to evening. This is the chief timber tree of Assam, eastern Bengal, and Chittagong, India, where it occurs along river banks and in swampy ground. It is commonly cultivated as an avenue tree.

For previous introduction see 49538.

94195. LEUCAENA GLAUCA (L.) Benth. Mimosaceae.

A shrub or tree up to 30 feet high, with a smooth trunk, bipinnate leaves made up of four to eight pinnae bearing 10 to 20 pairs of narrowly lanceolate leaflets half an inch long, and globular heads of small white flowers. The young branches are used as forage.

For previous introduction see 88156.

94196. OCHROMA LAGOPUS Swartz. Bombacaceae. **Balsa wood.**

A West Indian tree up to 60 feet high, with large yellowish white flowers. The wood, stronger and much lighter than basswood, is used for refrigeration purposes, insulation, and airplane construction. The very small seeds are embedded in a silk-cotton lint which is used in life preservers, as it does not absorb water.

For previous introduction see 73124.

94197. ORANIA PALINDAN (Blanco) Merr. Phoenicaceae. **Palm.**

Banga. A tall unarmed ornamental palm, native to the interior of Bukidnon, Mindanao, found between 900 and 1,500 feet altitude. The trunk is straight and remarkably uniform in diameter, rarely exceeding 6 inches. The leaves are pinnate and silvery beneath. The natives use the straight-grained, durable wood for floors, fences, etc.

For previous introduction see 46738.

94198. PITHECOLLOBIUM SCUTIFERUM (Blanco) Benth. Mimosaceae.

A small tree 10 to 12 inches in diameter, native to the Philippines. The bipinnate leaves have one pair of pinnae each bearing two to three pairs of oblong to ovate leaflets 4 to 6 inches long. The small flowers are borne in panicles and are followed by large curved red pods which open and show the blue seeds.

94199. SIDEROXYLON MACRANTHUM Merr. Sapotaceae.

A large Philippine tree with somewhat leathery shining leaves up to 7 inches in length and small creamy white flowers which are crowded in clusters at the tips of the branches. The roundish fruits, slightly over an inch in diameter, are two seeded or three seeded.

For previous introduction see 54895.

94200. SWIETENIA MACROPHYLLA King. Meliaceae. **Mahogany.**

94176 to 94201—Continued.

A large tree, native to tropical America, with compound leaves made up of three to five pairs of elliptic-oblong leaflets 4 to 8 inches long and small flowers in panicles. The ovoid woody fruits are 6 inches long and contain winged seeds 3 to 5 inches long. This species forms the mahogany being marketed at the present time.

94201. TECTONA GRANDIS L. f. Verbenaceae. **Teak.**

The common teak is a native to southern and central India. The young branches are quadrangular, the leaves opposite and elliptical or egg-shaped, and the white flowers are borne in terminal panicles. The wood is highly prized by shipbuilders because of its great strength and durability.

For previous introduction see 66242.

94202. SCILLA CHINENSIS Benth. Liliaceae.

From China. Bulbs collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received September 12, 1930. Numbered in August, 1931.

No. 7003. Collected on the mountain side, near the eight famous temples near Peiping. A bulbous perennial, native to China, with two or three linear channeled leaves a foot in length and a scape about 2 feet high bearing a raceme nearly a foot long of delicate rose-pink flowers a quarter of an inch across. The flowers appear in the early summer.

94203. ICHTHYOMETHIA PISCIPULA (L.) Hitch. Fabaceae.

From the American Virgin Islands. Seeds presented by Claud L. Horn, Horticulturist, Agricultural Experiment Station, Christiansted, Saint Croix. Received August 25, 1931.

An irregularly branched tree up to 50 feet high, with reddish-brown scaly bark and stout branches. The pinnate leaves, 15 inches long, have seven to nine oblong to obovate leaflets 4 inches long, and the pea-shaped white flowers, tinged with red, are borne in panicles 4 to 8 inches long. It is native to the West Indies and northern Mexico.

94204 and 94205. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Jamaica, British West Indies. Plants presented by A. P. Hanson, Agricultural Instructor, Stony Point. Received August 28, 1931.

94204. *Jamaica black.*

94205. *Sam Clark.*

94206. RHAPIDOPHYLLUM HYSTRIX Wendl. and Drude. Phoenicaceae. **Needle palm.**

From Georgia. Seeds presented by Benjamin W. Hunt, Eatonton. Received January 14, 1930. Numbered in August, 1931.

An attractive dwarf fan palm, native to the lowlands of South Carolina, Georgia, and Florida, but very local in its distribution. It is now quite rare and appears to be approaching extinction as a wild plant. The 2-foot to 3-foot stems are erect

94206—Continued.

or creeping, with leaves dark shiny green above and silvery gray beneath. The leaves reach a height of 3 to 4 feet. Slender sharp black spines up to a foot long project from the trunk in every direction and also surround and protect the inflorescence. The staminate and pistillate flowers are borne on separate plants.

94207. LAGUNARIA PATERSONII (Andrews) Don. Malvaceae.

From Sicily. Seeds presented by Giardino Allegra, Catania. Received July 31, 1931.

A tree up to 50 feet high, native to the Norfolk Islands. The broadly lanceolate to ovate-oblong leaves are 3 to 5 inches long, and the pale-rose hibiscuslike flowers, 2 to 3 inches across, are in axillary clusters of three to five.

94208. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Jamaica, British West Indies. Plants presented by A. P. Hanson, Agricultural Instructor, Stony Point. Received August 29, 1931.

Jamaica Sugar.

94209. BAMBUSA LONGISPICULATA Gamble. Poaceae. **Bamboo.**

From India. Seeds presented by R. N. Parker, Forest Botanist, New Forest, Dehra Dun. Received August 29, 1931.

An Indian clump bamboo with bright green stems 20 to 80 feet high and numerous branches bearing dense foliage. It appears to differ from *Bambusa tulda* only in the larger spikelets.

For previous introduction see 81495.

94210. FICUS RIGO F. M. Bailey. Moraceae. **Fig.**

From Hawaii. Plants presented by H. L. Lyon, in charge, Department of Botany and Forestry, Experiment Station of the Hawaiian Sugar Planters' Association, Honolulu. Received August 31, 1931.

A tree with angular branches and alternate oblong to ovate leaves 3 to 4 inches long. The small fruits, about one-fourth of an inch in diameter, have three persistent basal bracts which are large in proportion to the size of the fruit. This tree is a source of rubber in the Rigo district of New Guinea.

94211. RAPHIA VINIFERA Beauv. Phoenicaceae. **Palm.**

From the Canal Zone. Seeds presented by James Zetek, Mojinga Swamp, Balboa. Received August 31, 1931.

The sugar or wine palm of west tropical Africa. A large handsome palm with immense pinnate leaves and ornamental fruits in enormous pendent bunches 10 to 12 feet long. This is a striking palm for large parks.

For previous introduction see 70746.

94212 to 94222.

From New Zealand. Plants presented by George A. Green, Secretary, New Zealand Horticultural Trades Association (Inc.), Auckland. Received September 1, 1931.

94212 to 94222—Continued.

94212 to 94215. CITRUS spp. Rutaceae.

94212. CITRUS LIMONIA Osbeck. **Lemon.**

Benjamin type. A short-thorned *Lisbon.*

For previous introduction and description see 93848.

94213 and 94214. CITRUS GRANDIS (L.) Osbeck (*C. decumana* Murr.) **Grapefruit.**

94213. *Poorman* (Morrison's type).

For previous introduction and description see 93849.

94214. *New Zealand* (Morrison's type).

94215. CITRUS LIMONIA Osbeck. **Lemon.**

Doncaster Lisbon.

94216 to 94218. PRUNUS SALICINA Lindl. Amygdalaceae. **Japanese plum.**

94216. *Purple King.*

94217. *Wilson's early.* A hybrid between the Japanese plum, *Burbank,* and *Prunus cerasifera divaricata,* the *cherry plum.*

94218. *Ngata.*

94219. AMYGDALUS PERSICA NECTARINA Ait. Amygdalaceae. **Nectarine.**

Ansenne.

94220. PRUNUS sp. Amygdalaceae. **Plum.**

Dreadnought.

94221. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). Amygdalaceae. **Peach.**

Prizetaker.

94222. PRUNUS sp. Amygdalaceae. **Plum.**

Sharp's Early.

94223 to 94225. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Tahiti, Society Islands. Bud wood presented by Harrison W. Smith, Papeari. Received September 3, 1931.

94223. *Rougier.*

94224. *Mission.* This is considered the best variety on the island.

94225. *Tutehau.* An excellent variety which comes true from seed.

94226. ARTOCARPUS LAKOOCHA Roxb. Moraceae.

From Ceylon. Seeds presented by S. W. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received August 4, 1931.

Kana-gona or *tampang-manis.* A handsome tropical tree with deep-green leaves and yellowish green sour fruits 2 inches in diameter. The edible fruits are good for stewing.

For previous introduction see 76877.

94227. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Cuba. Seeds purchased from Severino Wilson, Playa del Vapor, Habana. Received August 4, 1931.

Melon de Castilla. A commercial variety introduced for the use of department specialists.

94228. CALOPOGONIUM MUCUNOIDES Desv. Fabaceae.

From Brazil. Seeds presented by Dr. A. Bitancourt, Estacão de Agrostologia, Deodoro, via Rio de Janeiro. Received August 4, 1931.

False oró. A tropical American legume with stems 3 to 10 feet long which form roots at each node, and racemes, 1 to 4 inches long, of pale-blue flowers. It forms a mat of foliage 1 to 2 feet thick and is used as a cover crop. It is also good for forage.

For previous introduction see 77294.

94229 to 94231. BRASSICA spp. Brassicaceae.

From Peiping, China. Seeds collected by Peter Liu. Received August 4, 1931.

A collection of commercial varieties purchased from a gardener near Peiping and introduced for the use of department specialists.

94229. BRASSICA JUNCEA (L.) Coss.

Chieh t'sai, pepper beet or turnip. This variety of Chinese turnip is very commonly used for making pickles.

94230. BRASSICA JUNCEA (L.) Coss.

Da tou ching, large leaf green cabbage. A variety used in the south of China for making soup.

94231. BRASSICA OLERACEA CAPITATA L. **Cabbage.**

Yang bai t'sai, foreign cabbage, also called *da tou t'sai* or large head cabbage. This variety is fried with meat or made into pickles.

94232. PRUNUS sp. Amygdalaceae.

From Persia. Scions presented by Jalil K. Hashimzade, American Agricultural School, Urumia (Rezaieh). Received April 1, 1930. Numbered in August, 1931.

A native Persian plum.

94233 and 94234.

From New Zealand. Plants presented by H. R. Wright, Avondale. Received July 30, 1930. Numbered in August, 1931.

94233. PRUNUS NIGRA Ait. Amygdalaceae. **Canada plum.**

94234. MALUS HALLIANA Koehne. Malaceae.

Variety *Parkmanii.* A double-flowered form; named for Francis Parkman, the historian, in whose garden near Boston it was first grown in this country.

For previous introduction see 49081.

94235 to 94242.

From the Union of South Africa. Seeds presented by M. Wilman, McGregor Museum, Kimberley. Received September 8, 1931.

94235 to 94237. ACACIA spp. Mimosaceae.

94235. ACACIA GIRAFFAE Willd.

The *Kameel-doorn* of the Transvaal is a valuable tree for arid regions in the warm temperate zone. The ripe pods are eaten greedily by stock. The tree thrives in sandy soil, attains a large size, and the dark reddish-brown wood is used by the natives in making spoons, knife handles, etc.

For previous introduction see 64215.

94236. ACACIA HORRIDA (L.) Willd. (*A. karroo* Heyne).

A spreading flat-topped spiny tree about 20 feet high, widely distributed throughout South Africa. The fragrant yellow flower heads are often visited by bees, but the main value of the tree in South Africa is as a shade for stock.

For previous introduction see 68137.

94237. ACACIA STOLONIFERA Burchell.

A spiny shrub said to have underground stoloniferous stems. The bipinnate leaves have three to seven pairs of pinnae, each bearing 7 to 15 pairs of oblong-lanceolate leaflets. The stipular spines, in pairs, are spreading and are white with recurved brown tips. The heads of fragrant whitish flowers are followed by straight yellow obliquely striate pods. It is native to southern Africa.

94238. ARCTOTIS FASTUOSA Jacq. Asteraceae.

An erect branching annual plant, 2 to 3 feet high, covered with jointed hairs. The scattered leaves, 3 to 4 inches long, are elliptic-lanceolate with coarsely toothed or sinuate margins, and the large showy flower heads have bright-orange rays. It is native to southern Africa.

94239. CLEMATIS BRACHIATA Thunb. Ranunculaceae.

A climbing vine, native to southern Africa, with bipinnate or tripinnately parted leaves having ovate toothed leaflets. The fragrant white flowers, 1 to 2 inches across, are borne in elongated panicles and are followed by orbicular margined fruits with feathery tails.

94240. GOSSYPIUM sp. Malvaceae. **Cotton.**

A wild cotton from Angola.

94241. TARCHONANTHUS MINOR Less. Asteraceae.

A strongly resin-scented shrub, native to southern Africa, with oblong to obovate entire leaves 1 to 2 inches long and short racemes of small woolly flower heads. It is said to be a good stock feed.

94242. ALOE SCHLECHTERI Schoenl. Liliaceae.

An aloe from southern Africa with olivaceous leaves about 8 inches long, armed on the margin with brown horny deltoid prickles. The light-yellow flowers are in dense racemes about 6 inches long on a short peduncle.

94243. AGAVE VILMORINIANA Berger. Amaryllidaceae.

From California. Plants presented by William Hertrich, Superintendent, Huntington Botanic Garden, San Marino. Received September 10, 1931.

One of the most beautiful of the soft-leaved agaves. It has no thorns or spikes on the foliage and has a very beautiful inflorescence.

94244. CITRUS NOBILIS DELICIOSA (Ten.) Swingle. Rutaceae. **Mandarin orange.**

From French Indo-China. Seeds purchased from M. Poilane, Institut des Recherches Agronomique, de l'Indochine, Division de Botanique, Annam. Received September 10, 1931.

Said to be one of the most prized varieties in southern French Indo-China.

94245. PERESKIA GRANDIFOLIA Haw. Cactaceae. **Bush pereskia.**

From the Canal Zone. Plants presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received September 14, 1931.

A shrub or tree 6 to 15 feet high, with a short spiny trunk, fleshy branches, oblong leaves 3 to 6 inches long, and terminal clusters of rose-colored to white flowers 1 to 2 inches across. It is native to Brazil.

For previous introduction see 93495.

94246. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Africa. Seeds presented by F. M. Grissett, Kribi, Cameroun. Received September 15, 1931.

A variety cultivated by the natives 100 miles southeast of Kribi.

94247 to 94257.

From China. Plants presented by G. Weidman Groff, Lingnan University, Canton. Received September 15, 1931.

94247. CLAUCENA LANSIUM (Lour.) Skeels (*C. wampi* Oliver). Rutaceae. **Wampi.**

No. 377. *Wong pei.* Purchased in the Canton market. A very ornamental small tree, 18 to 20 feet high. In the spring it bears small dense panicles of whitish sweet-scented flowers, and in midsummer the grapelike clusters of edible berries appear. The individual fruits are about the size of a large marble, with a rough pale straw-yellow orangelike rind covered with glands filled with green balsamic oil. The rather large seeds, one to three in number, are inclosed in colorless juicy pulp which has an agreeable aromatic acid flavor. The wampi is a native of southern China, where the berries are highly esteemed as a dessert fruit and as preserves.

For previous introduction see 55598.

94248. DRACONTOMELON SINENSE Stapf. Anacardiaceae.

No. 379. *Yan min* or *ngan min.* From the Lingnan University gardens. A tree 25 to 30 feet high with brownish-yellow ovoid fruits from 1 to 2 inches in diameter. The taste is pleasant but slightly acid.

For previous introduction see 54655.

94249 to 94257. LITCHI CHINENSIS Sonner. Sapindaceae. **Lychee.**

A collection of varieties from the Lingnan University gardens.

94249. No. 349. *Chung un hung.*

94250. No. 357. *Chong un hung.*

94251. No. 351. *Kwa luk.*

94252. No. 350. *Kuei wei.*

94247 to 94257—Continued.

94253. No. 358. *Shan chi.*

94254. No. 194. *Pat po keung.*

94255. No. 205. *Shan chi.*

94256. No. 376. *Shan chi.* Originally from the Tsang Shen district.

94257. No. 365. *Tai tso.*

94258. CINNAMOMUM BURMANNI Blume. Lauraceae.

From Sumatra. Seeds presented by Edward Jacobson, Fort de Kock. Received September 15, 1931.

An evergreen tree, native to Java, with shining-green, ovate-oblong papery leaves of variable size, usually 2 to 6 inches long, emitting a cinnamon aroma.

94259. ANOPTERUS GLANDULOSUS Labill. Escalloniaceae.

From Tasmania. Seeds presented by L. A. Evans, Hobart. Received September 17, 1931.

Mountain-laurel. A tall evergreen Tasmanian shrub with spreading branches, oblong dentate leaves 4 to 6 inches long clustered at the ends of the branches, and axillary racemes of white flowers.

For previous introduction see 76702.

94260 to 94262.

From Cuba. Seeds collected by John G. Jack, Arnold Arboretum, Jamaica Plain, Mass. Received September 18, 1931.

94260. CLIDEMIA HIRTA (L.) D. Don. Melastomaceae.

A slender branching shrub 3 to 8 feet high with ovate leaves half an inch long, and axillary racemes of small campanulate, white or rosy flowers. It is native to tropical America.

94261. HUERTA CUBENSIS Griseb. Anacardiaceae.

A tropical tree with compound leaves composed of 8 to 10 pairs of narrow-oblong leaflets 3 to 4 inches long and minute flowers in lax axillary panicles. Native to western Cuba.

94262. SECURINEGA RAMIFLORA (Ait.) Muell. Arg. (*S. flueggeoides* Muell. Arg.). Euphorbiaceae.

A shrub with slender wandlike branches, ovate-lanceolate bright-green or yellow-green leaves 1 to 2 inches long, and axillary clusters of inconspicuous greenish-white flowers, followed by green capsules. It is native to China and Japan.

94263. FICUS sp. Moraceae. **Fig.**

From Africa. Scions presented by Dr. W. L. Thompson, Mount Silinda, Southern Rhodesia. Received September 18, 1931.

A wild fig which bears small but edible fruits.

94264 to 94266.

From France. Seeds presented by R. Salgues, Brignoles Botanic Garden. Received September 21, 1931.

94264. GENTIANA LUTEA L. Gentianaceae. **Yellow gentian.**

94264 to 94266—Continued.

A coarse perennial, too large for the rock garden, with 3-foot to 4-foot stems bearing handsome rugose foliage, crowned in late summer in the upper whorls of leaves with crowded clusters of slender-lobed golden-yellow flowers.

For previous introduction see 78932.

94265. LATHYRUS CICERA L. Fabaceae.

A vine, either prostrate or ascending, with slightly winged glabrous stems up to 8 inches long. The small lanceolate leaves are in pairs on winged petioles; the upper leaves have simple undivided tendrils half as long as the leaf; the lower leaves have no tendrils. The solitary dull-red flowers, less than an inch long, are either erect or nodding.

For previous introduction see 40798.

94266. ORNITHOGALUM PYRENAICUM L. Liliaceae.

A bulbous plant about 2 feet high, with narrow onionlike leaves and whitish flowers on a simple leafless stalk. It is native to Europe.

For previous introduction see 40798.

94267. MUCUNA sp. Fabaceae.

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 15, 1930. Numbered in September, 1931.

94268. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Brazil. Plants received through L. W. Jangeneel, California Packing Corp. Received August 21, 1930. Numbered in September, 1931.

94269. GARCINIA MANGOSTANA L. Clusiaceae. **Mangosteen.**

From Central America. Plants purchased from the United Fruit Co., through Wilson Popenoe, Research Department, Tela, Honduras. Received September 6, 1930. Numbered in September, 1931.

94270. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Hawaii. Plants presented by W. T. Pope, senior horticulturist, Agricultural Experiment Station, Honolulu. Received November 3, 1930. Numbered in September, 1931.

Victoria. A variety of mango which is not attacked by the Mediterranean fruit fly.

94271. EUGENIA DENSIFLORA (Blume) Duthie. Myrtaceae.

From Java. Seeds presented by the director, Botanic Gardens, Buitenzorg. Received December 18, 1930. Numbered in September, 1931.

A tree, native to the Malay Archipelago, with oblong leaves 4 to 10 inches long and axillary cymes of clear rose-colored flowers and round fruits about half an inch in diameter.

94272. CITRUS sp. Rutaceae.

From the Union of Soviet Socialist Republics. Plants presented by Maj. C. R. Olberg, Tiflis, Transcaucasia. Received September 22, 1931.

94272—Continued.

An orange, known locally as a mandarin, and very similar to the tangerine, but larger, sweeter, and seedless. It is said to have come originally from Japan.

94273. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From Chile, South America. Plants presented by Dr. Alberto Graf Marin, Chief, Servico de Sanidad Vegetal. Received September 24, 1931.

Imperial.

94274. RHUS sp. Anacardiaceae.

From China. Seeds presented by T. D. Payne, China Inland Mission, Luchang, Yunnan. Received September 25, 1931.

Paint tree. The Chinese make a superior varnish out of the sap of this tree, although a bad skin poisoning is often contracted in the handling of it. The Tibetan Lisu people make a fair substitute for lard out of the seed.

94275 to 94277.

From Australia. Seeds presented by F. J. S. Wise, Agricultural Advisor, Broome, Western Australia. Received September 25, 1931.

A collection of grass seeds which are suited to semiarid conditions.

94275. ASTREBLA SQUARROSA Hubbard. Poaceae. **Grass.**

A leafy tufted perennial grass with short rhizomes from which rise the nearly erect stems to a height of 6 to 8 feet. The linear leaves are 15 inches long, and the spikelike flattened racemes are 4 to 8 inches long. It is native to Australia.

94276. ASTREBLA sp. Poaceae. **Grass.**

94277. ERAGROSTIS CHAETOPHYLLA Steud. Poaceae. **Grass.**

The slender rigid densely tufted stems up to 12 inches high rise from a somewhat bulbous slightly woolly base and are leafy to the top. The narrow panicles, 1 to 3 inches long, are made up of thin flat spikelets. It is native to Australia.

94278 and 94279.

From Peru. Seeds presented by Paul G. Ledig, Magnetic Observatory of the Carnegie Institution of Washington, D. C., Huancayo. Received September 28, 1931.

94278. MIMULUS sp. Scrophulariaceae.

No. 1. A low shrub with woody stems, which grows in sunny situations in very rocky places.

94279. MIMULUS sp. Scrophulariaceae.

No. 2. A short-stemmed herb which grows in rocky soils in partly shady situations (such as the side of a cliff only touched by the sun in the morning or evening).

94280. PIPER METHYSTICUM Forst. Piperaceae.

From Hawaii. Cuttings presented by W. T. Pope, Senior Horticulturist, Office of Experiment Stations, Honolulu. Received September 29, 1931.

94280—Continued.

Kava or *awa*. A nearly glabrous shrub, native to the Pacific Islands, 8 to 10 feet high, with round-oval leaves, deeply cordate at the base and acuminate at the apex. From the root of this plant is made the drink known as kava, awa, or yaquona.

94281. PASSIFLORA QUADRANGULARIS L. Passifloraceae. **Giant granadilla.**

From Central America. Seeds presented by the United Fruit Co., through Wilson Popenoe, Research Department, Tela, Honduras. Received September 29, 1931.

An ornamental Brazilian vine producing strongly perfumed fruits which ripen from

94281—Continued.

yellow to orange and have flesh about an inch thick.

For previous introduction see 78595.

94282. PIPER METHYSTICUM Forst. Piperaceae.

From the Society Islands. Plant and cuttings presented by Harrison W. Smith, Papeari, Tahiti. Received September 30, 1931.

For previous introduction and description see 94280.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 109

Washington, D. C. ▼ Issued June, 1933

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, OCTOBER 1 TO DECEMBER 31, 1931 (Nos. 94283–95551)

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INTRODUCTORY STATEMENT

This inventory, covering the period from October 1 to December 31, 1931, and containing 1,269 numbers (94283–95551), records almost altogether material that was brought in for department workers. This is particularly exemplified by the enormous collections of cereals presented by the Union of Soviet Socialist Republics through J. G. Dickson, University of Wisconsin, Madison, Wis. This remarkable collection contains 815 numbers (94302–94762, 94787–94922, 95091–95308) of barley, emmer, and many types of wheat, not only cultivated forms and hybrids produced in the Union of Soviet Socialist Republics but wild examples from many original sources.

The Union of Soviet Socialist Republics has also contributed a valuable collection of pistache seeds from Turkmenistan, including fruits from wild and from cultivated trees (94939–95046), an extensive and useful collection of wild and cultivated plums (95049–95063) collected through the Caucasus, and a collection of herbaceous plants and grasses (94923–94936) of possible value as sand binders or as grasses for poor and arid land.

The study of Ficus species is augmented by the introduction from the Botanic Gardens, Buitenzorg, Java, of *Ficus korthalsii*, *F. procera crassiramea*, *F. pseudo-acamptophylla*, *F. recurva*, and *F. rigida* (94296–94300); from R. E. Holttum, Director, Singapore Botanic Garden, Straits Settlements, of *F. alba* and *F. chrysocarpa* (95089, 95090); from Arthur F. Fischer, Director of Forestry, Department of Agriculture and Natural Resources, Philippine Islands, of *F. minahassae*, *F. nota*, and *F. odorata* (95369–95371).

The studies in palms are represented by *Coccothrinax argentea* and *Paurotis wrightii* (95047–95048), from Mrs. F. S. Earle, Herradura, Cuba; *Livistona mariae* (95077), from the Council for Scientific and Industrial Research, Canberra, Australia; and *Livistona hoogendorpii* (95088), from Dr. Robert M. Grey, Harvard Botanic Garden, Soledad, Cuba.

Various ornamentals have been received, notably an interesting set of Australian plants from Ida Richardson, Perth, Western Australia (95314–95344), including some less-known Acacias, Eucalyptus, Hakea, Melaleuca, and Hibiscus. But possibly the most interesting contributions are the seeds presented by Maj. Lionel de Rothschild, London, England, from his share in the Forrest Expedition to China, the last exploring trip of that veteran plant collector.

The botanical determinations of these introductions have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., November 10, 1932.

163029—33——1

INVENTORY[1]

94283. GOSSYPIUM sp. Malvaceae. **Cotton.**

From Bangui, French Equatorial Africa. Seeds presented by the Compagnie Cotonnière Equatoriale Française, through T. H. Kearney, Bureau of Plant Industry. Received October 2, 1931.

Native cotton, introduced for the use of department specialists working with the breeding of Egyptian cotton.

94284 and 94285.

From Manchuria. Seeds purchased from Manchu Nosan Shokai (Inc.), wholesale seed growers and dealers, Dairen. Received October 2, 1931.

94284. VICIA VILLOSA Roth. Fabaceae. **Hairy vetch.**

Manchurian-grown seed.

94285. VIGNA SINENSIS (Torner) Savi. Fabaceae. **Cowpea.**

Manchurian-grown seed.

94286 to 94288.

From the Union of Soviet Socialist Republics. Seeds presented by the chief, Bureau of Introduction, Leningrad, at the request of Dr. V. P. Alekseev, Subtropical Branch, Sukhum, Caucasus. Received October 2, 1931.

94286. PASSIFLORA EDULIS Sims. Passifloraceae. **Purple granadilla.**

No. 41399. A small woody herbaceous vine, climbing by tendrils, that produces white flowers tinged with purple, followed by egg-shaped edible fruits. These may be eaten fresh or cooked or used as flavoring. Hardy only in almost frost-free regions.

For previous introduction see 49475.

94287 and 94288. PSIDIUM CATTLEIANUM Sabine. Myrtaceae. **Strawberry guava.**

94287. No. 41400. A red-fruited form.

94288. No. 41401. A yellow-fruited form.

94289. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

From China. Seeds presented by W. M. Hayes, Tenghsun, Shantung. Received October 5, 1931.

Apricot kernels of an unusual shape.

94290 to 94293. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From Hawaii. Scions presented by W. T. Pope, senior horticulturist, Office of Experiment Stations, Honolulu. Received October 12, 1931.

94290. *Holt.* **94292.** *Mulgoba.*

94291. *Jamshedi.* **94293.** *Whitney.*

94294. PODOPHYLLUM EMODI Wall. Berberidaceae. **Himalayan mayapple.**

From India. Seeds presented by the conservator of forests, Chamba, Chamba State. Received October 12, 1931.

A herbaceous perennial about a foot high, native to India, much like our native species, with leaves 5-lobed to 7-lobed, marbled and shaded with deep bronze in spring; the flowers, pale rose to white, are followed by egg-shaped fruits of deep reddish color.

For previous introduction see 46092.

94295. CALAMAGROSTIS EPIGEJOS (L.) Roth. Poaceae. **Grass.**

From Harbin, Manchuria. Seeds purchased from Mr. Rossiter and sent through Owen L. Dawson, Agricultural Commissioner, Shanghai, China. Received October 13, 1931.

A stout perennial grass, native to Manchuria, which grows on rather poor soil and is rather abundant.

For previous introduction see 90746.

94296 to 94300. FICUS spp. Moraceae. **Fig.**

From Java. Seeds presented by the curator, Buitenzorg Botanic Gardens. Received October 14, 1931.

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[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications, therefore, must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in, so that definite identification can be made.

94296 to 94300—Continued.

94296. FICUS KORTHALSII Miquel.

A wild fig from southern Borneo, which resembles *Ficus elastica* in foliage and habit. The leaves up to 8 inches long are rigid and leathery, and the ellipsoid fruits are nearly an inch in length.

For previous introduction see 68857.

94297. FICUS PROCERA CRASSIRAMEA (Miquel) King.

A large tree with coriaceous narrowly elliptic to ovate leaves having thickened and slightly recurved edges. The sessile globular fruits, one-half inch in diameter, are subtended by three fleshy bracts as long as the fruit. It is native to Java.

94298. FICUS PSEUDO-ACAMPTOPHYLLA Valet.

A large tree with rufous-scurfy branchlets, obovate-oblong coriaceous leaves 3 to 6 inches long, and slightly flattened globose fruits about a quarter of an inch in diameter. It is native to Java.

94299. FICUS RECURVA Blume.

A climbing shrub, epiphytic or clambering over rocks, native to the Malay Archipelago. The young shoots are villous; the elliptic to lanceolate, thinly coriaceous leaves are 3 to 4 inches long, and the small orange-yellow figs are in pairs in the axils of the leaves.

94300. FICUS RIGIDA Miquel.

An epiphytic shrub or small tree with narrow leathery leaves about 6 inches long. The orange-yellow fruits, one-half inch in diameter, are white spotted and are sessile in pairs at the ends of the branchlets.

For previous introduction see 72596.

94301 to 94762.

From the Union of Soviet Socialist Republics. Seeds obtained by J. G. Dickson, professor of plant pathology, College of Agriculture, Madison, Wis., and agent in cereal investigations, United States Department of Agriculture. Received November 20, 1930. Numbered in October, 1931.

94301. AEGILOPS CYLINDRICA Host. Poaceae. Grass.

No. 46. Collected at Erivan, Armenia. A purple type.

94302 to 94333. SECALE CEREALE L. Poaceae. Rye.

94302. No. 2, white chaff. Collected at Erivan, Armenia.

94303. No. —. From Kostek, Caucasia. A winter rye.

94304. No. 2, brown chaff. From Erivan, Armenia.

94305. No. 4. From Turkish Armenia. A winter rye.

94306. No. 10. From Erivan, Armenia.

94307. No. 31. From Saratov. A winter rye.

94308. No. 34. From Saratov. A hybrid winter-resistant rye.

94309. No. 35. Collected at Kharkov, Asia Minor, in 1929. A winter rye.

94310. No. 39. From Yugoslavia.

94301 to 94762—Continued.

94311. No. 42. From the region around Erivan, Armenia.

94312. No. 23. From Kostek. A winter rye.

94313. No. 44. Collected at a high altitude near Erivan, Armenia.

94314. No. 45. A winter rye collected at a high altitude near Erivan, Armenia.

94315. No. 53. A winter rye from Erivan, Armenia.

94316. No. 55. From Erivan, Armenia.

94317. No. 304 W1 679. From the Dekaprilovitch collection at Tiflis, Georgia.

94318. No. 305 W1 680. From the Dekaprilovitch collection at Tiflis, Georgia.

94319. No. 344. Collected at Otrada, Kubanska.

94320. No. 345. Early Krugminsk. Collected at Otrada, Kubanska.

94321. No. D570. *Vyatka* variety. From Leningrad.

94322. No. D581. *Vyatka*. A winter variety. From Leningrad.

94323. No. 551. *Landiog*. From Svalof.

94324. No. 552. From Svalof.

94325. No. 553. From Svalof.

94326. No. 554. From Svalof.

94327. No. 555. Svalof No. 0801. From Svalof.

94328. No. 556. *Stjarnrag* rye. From Svalof.

94329. No. 557. The standard winter rye. From Svalof.

94330. No. 558. Svalof No. 0280. From Svalof.

94331. No. 559. *Svalof*. From Svalof.

94332. No. 560. *Rye Svalof*. From Svalof.

94333. No. 561. Svalof No. 816. From Svalof.

94334 to 94762. TRITICUM spp. Poaceae.

94334 to 94601. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Common wheat.

94334. 1BSW. Source not known.

94335. 1BSR. Source not known.

94336. No. 3. Winter wheat from Erivan, Armenia.

94337. No. 5. Winter wheat from Armenia.

94338. No. 6. Winter wheat from Armenia.

94339. No. 7. Winter wheat from Armenia.

94340. No. 8. Winter wheat from Armenia.

94341. No. 9. Winter wheat from Armenia.

94342. No. 12. Winter wheat from the Vavilov South African collection.

94301 to 94762—Continued.

94343. No. 13BSW. Winter wheat from Gonzah, Armenia.

94344 and 94345. *Reasante.* Winter wheat from the original Flemish collection. Collected at Gonzah, Armenia.

94344. No. 14BSW.

94345. No. 15.

94346. No. 17. Siberian spring wheat from Gonzah, Armenia.

94347 and 94348. Winter wheat from a South African collection at Gonzah, Armenia.

94347. No. 19.

94348. No. 20AWS.

94349. No. 22. Winter wheat from Gonzah, Armenia.

94350. No. 33. Winter wheat from Saratov.

94351. No. 36. Winter wheat from Saratov.

94352 to 94354. A collection of black-stripe winter wheat from Armenia.

94352. No. 39Bs.

94353. No. 39BPW.

94354. No. 39BSW.

94355 to 94358. Winter wheat from Erivan, Armenia.

94355. No. 40. *Schroeder.*

94356. No. 41.

94357. No. 48.

94358. No. 51. Originally from Abyssinia.

94359 and 94360. Winter wheat from Odessa.

94359. No. 52ASW.

94360. No. 52BSW.

94361. No. 54. Rust-resistant winter wheat from Kiev.

94362. No. 58. Winter wheat, selection No. 392. The highest-yielding wheat in the District of Krasnodar.

94363 and 94364. Winter wheat, collected at a high altitude near Erivan, Armenia.

94363. No. 59BS. Black stripe.

94364. No. 59BSW.

94365. No. 60. Winter wheat from Erivan, Armenia.

94366. No. 61BSW. Winter wheat, collected at a high altitude near Erivan, Armenia.

94367 and 94368. Winter wheat from Erivan, Armenia.

94367. No. 61 club BP.

94368. No. 61APW.

94369. No. 62. Mejster selection of winter wheat from Saratov.

94370 to 94380. Winter wheat from Erivan, Armenia.

94370. No. 63.

94371. No. 65BSW.

94301 to 94762—Continued.

94372. No. 65BPR.

94373. No. 65BPW.

94374. No. 65BSR.

94375. No. 66BPR.

94376. No. 66APR.

94377. No. 66BPW.

94378. No. 66ASW.

94379. No. 66BSW.

94380. No. 66BSR.

94381. No. 67. Bronz winter wheat from Bristol, England.

94382. No. 43. From Erivan, Armenia.

94383 to 94388. From Stanton, England.

94383. No. 68. *Square head.*

94384. No. 69. A collection of rust-resistant varieties.

94385. No. 70. Winter wheat.

94386 to 94388. Mixed types of winter wheat.

94386. No. 71ASW.

94387. No. 71ASR.

94388. No. 71APW.

94389 to 94392. Winter wheat from Bristol, England.

94389. No. 72. *Square head.*

94390 to 94392. A collection of mixed varieties.

94390. No. 73APW.

94391. No. 73ASW.

94392. No. 73ASR.

94393 and 94394. Winter wheat from Stanton, England.

94393. No. 74. *Bronz head.*

94394. No. 75. *Square head.*

94395 to 94413. Winter wheat from Bulgaria.

94395. No. 76.

94396. No. 77.

94397. No. 78. Selection N.

94398. No. 79. Experiment station variety *Silvata.*

94399. No. 80.

94400. No. 81.

94401. No. 82.

94402. No. 83.

94403. No. 84. Variety *Kniea.* A selection of winter wheat from the North Bulgaria Experiment Station.

94404. No. 85

94405. No. 86. A mixed sample of wheat and rye.

94406 to 94413. Pure line winter wheat from the North Bulgaria Experiment Station.

94406. No. 87. Experiment Station No. 7.

94301 to 94762—Continued.

94407. No. 88. Experiment Station No. 14.

94408. No. 89. Experiment Station No. 16.

94409. No. 90. Experiment Station No. 159.

94410. No. 91. Experiment Station No. 84 Peasant.

94411. No. 92. Experiment Station No. 84.

94412. No. 93. Hybrid native × No. 16.

94413. No. 94. Experiment Station No. 16 × native.

94414 to 94416. Winter wheat from Yugoslavia.

94414. No. 95.

94415. No. 96.

94416. No. 97.

94417 to 94544. From Valki. A series of winter-resistant winter wheats grown and selected for winter resistance three years at the Valki Experiment Station.

F.P.I. No.	Dickson's No.	Experiment station No. or name	Source
94417	98	1/e 34	Kologotska, northern Russia.
94418	99	1 A 34	Do.
94419	100	1 r/3 mg	Orloff.
94420	101	2 mg	Do.
94421	102	3 mg	Voronezh.
94422	103	4 mg	Do.
94423	104	5 mg	Do.
94424	105	5 r/e 34	Do.
94425	106	6 r/e 34	Do.
94426	107	7 r/e mg	Samara.
94427	108	7 r/e 34	Minsk, Siberia.
94428	109	8 r/e mg	Besenchuk.
94429	110	8 r/e 34	Minsk, Siberia.
94430	111	9 r/e 34	Do.
94431	112	9 r/e mg	Do.
94432	113	10 r/e mg	Do.
94433	114	11 r/e 34	Besenchuk.
94434	115	12 r/e 34	Do.
94435	116	14 r/e 34	Voronezh.
94436	117	18 r/e 34	Do.
94437	118	19 r/e 34	Samara.
94438	119	20 r/e 34	Do.
94439	120	21 r/e 34	Do.
94440	121	22 r/e mg	Kiev.
94441	122	23 r/e mg	Do.
94442	123	23-a r/e mg	Do.
94443	124	25 r/e mg	Patoloa.
94444	125	26 r/e mg	Kharkov.
94445	126	27 r/e mg	Do.
94446	127	27 r/e 34	Bushkeria, Siberia.
94447	128	28 r/e mg	Kharkov.
94448	129	29 r/e mg	Dnepropetrovsk.
94449	130	29 r/e 34	Chernoshaska.
94450	131A	30 r/e 34	Do.
94451	131B	30 r/e mg	Ukraine selection.
94452	132	31 r/e mg	Dnepropetrovsk.
94453	133	31 r/e 34	Chernosodon.
94454	134	32 r/e 34	Valonsky.
94455	135	33 r/e 34	Podolsky.
94456	136	33 r/e mg	Zakokanesky, Ukraine.
94457	137	34 r/e 34	Podolsky.
94458	138	34 r/e mg	Ukraine.
94459	139	35 r/e mg	Do.
94460	140	35 r/e 34	Poltora.

94301 to 94762—Continued.

F.P.I. No.	Dickson's No.	Experiment station No. or name	Source
94461	141	37 r/e mg	Ukraine.
94462	142	37 r/e 34	Do.
94463	143	38 r/e mg	Dnepropetrovsk.
94464	144	39 r/e 34	Ukraine.
94465	145	40 r/e mg	Crimea.
94466	146	41 r/e mg	Do.
94467	147	42 r/e mg	Kiev.
94468	148	43 r/e mg	Crimea.
94469	149	43 r/e 34	Kiev.
94470	150	44 r/e mg	Ukraine.
94471	151	45 r/e mg	Krasnodar.
94472	152	45 r/e 34	Kiev.
94473	153	46 r/e mg	Odessa.
94474	154	47 r/e 34	Kiev.
94475	155	47 r/e mg	Krasnodar.
94476	156	48 r/e mg	Tiflis, Georgia.
94477	157	48a r/e 34	Kiev.
94478	158	49 r/e mg	Tiflis, Georgia.
94479	159	50 r/e mg	Ural station.
94480	160	52 r/e mg	Chelabinsk, Siberia.
94481	161	53 r/e mg	Do.
94482	162	55 r/e mg	Omsk, Siberia.
94483	163	56 r/e mg	Altai, Siberia.
94484	164	57 r/e mg	Charvoorsk.
94485	165	58 r/e mg	Cheva, Turkistan.
94486	166	59 r/e mg	Dnepropetrovsk.
94487	167	60 r/e mg	Cheva, Turkistan.
94488	168	61 r/e mg	Do.
94489	169	62 r/e mg	Do.
94490	170	65 r/e mg	Uzbekistan.
94491	171	66 r/e mg	Do.
94492	172	74 r/e mg	Pottava.
94493	173	75 r/e mg	Do.
94494	174	76 r/e mg	Do.
94495	175	78 r/e mg	Do.
94496	176	79 r/e 34	Do.
94497	177	80 r/e 34	Do.
94498	178	81 r/e 34	Do.
94499	179	106 r/e 34	Kharkov.
94500	180	107 r/e 34	Kharkov station.
94501	181	127 r/e 34	Do.
94502	182	128 r/e 34	Do.
94503	183	130 r/e 34	Do.
94504	184	131 r/e 34	Do.
94505	185	132 r/e 34	Do.
94506	186	133 r/e 34	Ukraine.
94507	187	136 r/e 34	Kharkov station.
94508	188	138 r/e 34	Ukraine.
94509	189	140 r/e 34	Dnepropetrovsk.
94510	190	141 r/e 34	Ukraine.
94511	191	142 r/e 34	Do.
94512	192	159 r/e 34	Daetskjsim Don.
94513	193	161 r/e 34	Crimea.
94514	194	163 r/e 34	Do.
94515	195	164 r/e 34	Do.
94516	196	165 r/e 34	Do.
94517	197	166 r/e 34	Krasnodar.
94518	198	167 r/e 34	Azerbaijan.
94519	199	168 r/e 34	Caucasia.
94520	200	169 r/e 34	Karabah.
94521	201	170 r/e 34	Tiflis.
94522	202	171 r/e 34	Do.
94523	203	172 r/e 34	Ural station.
94524	204	173 r/e 34	Tubinsk, Siberia.
94525	205	174 r/e 34	Siberian selection.
94526	206	176 r/e 34	Altai, Siberia.
94527	207	177 r/e 34	Vladivostok.
94528	208	178 r/e 34	Cheva, Turkistan.
94529	209	179 r/e 34	Do.
94530	210	181 r/e 34	Do.
94531	211	183 r/e 34	Do.
94532	212	187 r/e 34	Do.
94533	213	188 r/e 34	Do
94534	214	190 r/e 34	Bacura, Turkistan.
94535	215	192 r/e 34	Turkistan.
94536	216	193 r/e 34	Do.

94301 to 94762—Continued.

F.P.I. No.	Dickson's No.	Experiment station No. or name	Source
94537	217	194 r/e 34	Uzbekistan.
94538	218	195 r/e 34	Turkmenistan.
94539	219	197 r/e 34	Uzbekistan.
94540	220	199 r/e 34	Persia.
94541	221	201 r/e 34	Asia Minor.
94542	222	207 r/e 34	Czechoslovakia.
94543	223	256 r/e 34	Armenia.
94544	224	294 r/e 34	Noro Urinsh, Siberia.
94545	228	Col. No. 600	Kharkov, 1930; from Palestine.
94546	341	Res. smut rust, Ukrainza Selection.	Otrada, Kubanska.
94547	362	21161	Asia Minor.
94548	364	20722. Marquis. Wheat-scab resistant.	Portugal.
94549	365	21820. Sp. wheat. Wheat-scab resistant.	Do.
94550	367	21811. Sp. wheat. Wheat-scab resistant.	Do.
94551	368	1318. Soft Sp. wheat. Wheat-scab resistant.	Italy.
94552	369	1319–19926. Sp. wheat. Wheat-scab resistant.	Do.
94553	370	16167. Soft Sp. wheat. Wheat-scab resistant.	Algeria.
94554	374	7944. Sp. wheat. Wheat-scab resistant.	Mongolia.
94555	375	8036. Sp. wheat. Wheat-scab resistant.	Do.
94556	376	8104. Sp. wheat. Wheat-scab resistant.	Amur.
94557	378	11365. Wheat-scab resistant.	Do.
94558	379	11370. Wheat-scab resistant.	Do.
94559	380	11388. Wheat-scab resistant.	Do.
94560	381	15620. Sel	Germany.
94561	382	16167. Wheat-scab resistant.	Algeria.
94562	383	do	Do.
94563	395	17329–1929	Palestine.
94564	396	17329–1922	Do.
94565	397	17329. Wheat-scab resistant.	Do.
94566	398	17313	Do.
94567	399		Do.
94568	400	7380	Do.
94569	401	17413	Syria.
94570	403	17723	Greece.
94571	404	17725	Do.
94572	410	22004	Leda Col. A47.
94573	411	22223	Samara.
94574	412	22233	Caisium collection.
94575	413	22390	Albidum 0604.
94576	416	19326	Italy.
94577	421	19565	Ethiopia.
94578	424	20248	Egypt.
94579	425	20249	Do.
94580	428	20651	Spain.
94581	430	20722	Portugal.
94582	431	21000	Asia Minor.
94583	432	22006	Khludorka.
94584	433	21013	Asia Minor.
94585	439	21820	Portugal.
94586	440	21821	Do.
94587	443	21826	Do.
94588	444	21938	Asia Minor.
94589	447	24982	
94590	448	25034	Uzbekistan.

94301 to 94762—Continued.

F.P.I. No.	Dickson's No.	Experiment station No. or name	Source
94591	450	25039	Caucasus.
94592	451	25059	
94593	573	Wheat N/18	Saratov.
94594	543	Square wheat	
94595	544	Hybrid wheat	Akermann collection.
94596	545	Landslide No. 49	Do.
94597	546	No. 60	Do.
94598	547	Höster	Do.
94599	548	No. 61, winter wheat	Do.
94600	549	No. 68, Landslide	Do.
94601	550	No. 71, Landslide	Do.

94602 to 94611. TRITICUM AESTIVUM × SECALE CEREALE. **Wheat-rye hybrid**

F.P.I. No.	Dickson's No.	Experiment station No. or name	Source
94602	38	Wheat and rye hybrid	Saratov.
94603	571	539/1549	Do.
94604	572	374/1160; winter hardy	Do.
94605	574	71/2956; winter hardy	Do.
94606	575	182/783	Do.
94607	576	49/2570; winter hardy	Do.
94608	577	102/740	Do.
94609	578	46/131	Do.
94610	579	223/845	Do.
94611	580	Early maturing	Do.

94612. TRITICUM CIVCERSTORMUM Vavilov.

No. 457. A rust-resistant selection from the Gonzah collection No. 30.

94613 to 94683. TRITICUM DICOCCUM Schrank. **Emmer.**

94613. No. 229. From the Kharkov Experiment Station, originally from Arabia.

94614. No. 230. A selection made at the Kharkov Experiment Station.

Nos. 94615 to 94683 are from the Vavilov collection at the Valki Experiment Station.

F.P.I. No.	Dickson's No.	Experiment station No. or name	Source
94615	231	161	Daghestan.
94616	232	1	Ural region.
94617	233	5	Daghestan.
94618	234	6	Gretzia.
94619	235	7	Do.
94620	236	8	Do.
94621	238	11	Armenia.
94622	239	12	Persia.
94623	240	13	Do.
94624	241	14	Do.
94625	242	15	Do.
94626	243	16	Turkey.
94627	244	17	Asia Minor.
94628	245	20	India.
94629	246	23	Ethiopia.
94630	247	24	Do.
94631	248	25	Do.
94632	249	27	Do.
94633	250	30	Morocco.
94634	251	32	Do.
94635	252	33	Persia.
94636	253	35	Do.

94301 to 94762—Continued.

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94637	254	38	Persia.
94638	255	45	Do.
94639	256	46	Do.
94640	257	48	Do.
94641	258	51	Germany.
94642	259	52	Do.
94643	260	56	Spain.
94644	261	58	Do.
94645	262	59	Do.
94646	263	60	Do.
94647	264	70	Do.
94648	265	71	Italy.
94649	266	74	Czechoslovakia.
94650	267	75	Do.
94651	268	76	Slavonia.
94652	269	77	Serbia.
94653	270	78	Do.
94654	271	81	Bulgaria.
94655	272	82	Do.
94656	273	83	Belgrade, Yugoslavia.
94657	274	84	Do.
94658	275	86	Spain.
94659	276	90	Bulgaria.
94660	277	91	Volga region.
94661	278	92	Armenia.
94662	279	93	Germany.
94663	280	94	Do.
94664	282	95. Early spelt	Arabia.
94665	286	96	Ethiopia.
94666	292	159	Daghestan.
94667	293	160	Do.
94668	294	162	Do.
94669	295	163	Do.
94670	296	385	Persia.
94671	297	723	Afghanistan.
94672		126HOB	
94673	298		Armenia.
94674	301	W1056	Georgia.
94675	302	W1071	Do.
94676	342	931	Otrada, Kubanska.
94677	343	932	Do.
94678	360	17696	Persia.
94679	361	19551	Ethiopia.
94680	372	1593	Germany.
94681	373	6463	
94682	402	17596. Spr. wheat; wheat-scab resistant.	Greece.
94683	456		Gonzah, Armenia.

94684 to 94734. TRITICUM DURUM Desf. Durum wheat.

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94684	11BPR, bl.hds.	Winter wheat	Gonzah.
94685	11BPB, bl.hds.	do	Do.
94686	14BPW.	Reasante; winter wheat.	Original; Flemish collection.
94687	16	do	Do.
94688	18	Winter wheat	Ethiopian collection.
94689	37	do	Erivan, Armenia.
94690	306	Smut resistant	Tiflis, Georgia.
94691	346	21164; wheat-scab resistant.	Amur, 1929; Asia Minor collection.
94692	359	17129	Shatilof, from Damascus.
94693	399	19565	Shatilof, from Ethiopia.

94301 to 94762—Continued.

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94694	377	8626	Originally from Egypt.
94695	384	16240	Originally from Algeria.
94696	385	16356	Originally from Saratov.
94697	386	16535	Tunisia collection.
94698	387	16599	Do.
94699	388	17120	Syrian collection.
94700	389	17202	Do.
94701	390	17234	Palestine collection.
94702	391	17261	Do.
94703	392	17271	Do.
94704	393	17276	Do.
94705	394	17327	Do.
94706	405	1774	Kipr collection.
94707	406	17793	Do.
94708	407	17842	Do.
94709	408	17855	Do.
94710	409	17868	Do.
94711	414	22397; Hordeiforme 010.	
94712	415	19284	Ethiopian collection.
94713	417	19331	Italian collection.
94714	418	19331	Odessa, 1929; Italian collection.
94715	419	19332	Italian collection.
94716	420	19340	Do.
94717	422	20119	Sardinian collection.
94718	423	20149	Do.
94719	426	20610	Spain.
94720	427	20612	Do.
94721	429	20721	Portuguese collection.
94722	434	21104; Odessa 1929.	Asia Minor.
94723	435	21104	Do.
94724	436	21807	Italian collection.
94725	437	21108	Asia Minor.
94726	438	21808	Italian collection.
94727	441	21824	Portuguese collection.
94728	442	21825	Do.
94729	445	21965; Milanopus 069.	Amur region.
94730	446	21966	Do.
94731	449	25-38	Caucasian collection.
94732	452	Selection from Gonzah.	Sardinia.
94733	454	do	Ethiopia.
94734	455	do	Do.

94735 to 94747. TRITICUM MONOCOCCUM L.

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94735	47	Multiple head, winter wheat	Erivan, Armenia.
94736	281	94a	Spain.
94737	283	95	Kharkov selection.
94738	284	95a	Do.
94739	285	96	Do.
94740	287	106	Spain.
94741	288	130	Kharkov selection.
94742	289	131	Do.

94301 to 94762—Continued.

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94743	290	136	Volga region.
94744	291	137	Do.
94745	299	W–2077	Dekaprilovitch collection, Tiflis, Georgia.
94746	300	W–2591	Do.
94747	301	W–1065	Do.

94748 to 94757. TRITICUM PERSICUM (Boiss.) Aitch. and Hemsl. **Persian wheat.**

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94748	349	W–2348	Georgia.
94749	350	W–2247	Do.
94750	351	W–2357	Do.
94751	352	W–2357a	Do.
94752	353	W–2259	Do.
94753	354	W–2330	Do.
94754	355	W–2265	Do.
94755	356	W–2328	Do.
94756	363		Shatilof.
94757	310		Leninkan, Armenia.

94758 and 94759. TRITICUM PERSICUM × DURUM. **Persian-durum wheat hybrid.**

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94758	226	Abyssinia soft wheat.	Kharkov Experiment Station, 1930.
94759	227	——do	Do.

94760 and 94761. TRITICUM TIMOPHEEVI Zhuk.

F. P. I. No.	Dickson's No.	Experiment station No. or name	Source
94760	303	W–2601	Dekaprilovitch collection, Tiflis, Georgia.
94761	357	W–2592	Do.

94762. TRITICUM TURGIDUM L. **Poulard wheat.**

No. 371. Spring wheat resistant to wheat scab, Shatilof Experiment Station No. 16156. Originally from Algeria.

94763 to 94786.

From Argentina. Seeds presented by the Director, Jardin Botánico, Buenos Aires. Received October 15, 1931.

94763. ACACIA SUNDRA (Roxb.) DC. Mimosaceae.

A tropical tree with dark-brown bark, erect twiggy branches, and short stout recurved spines on the bark. The bipinnate leaves are 4 or 5 inches long, and the yellow flowers are in short-stalked axillary spikes. The wood is very hard and heavy.

94764. ACACIA VISCO Lorentz. Mimosaceae.

An Argentine acacia, sparsely armed with recurved spines. The smooth sessile flowers, with numerous long stamens, form scythe-shaped legumes over an inch in width. The leaves are pinnately compound. The striped walnut-colored wood is hard and durable and valued highly for its resistance to moisture; it is used for all kinds of cabinetwork.

For previous introduction see 88200.

94765. ARECASTRUM ROMANZOFFIANUM (Cham.) Becc. (*Cocos romanzoffiana* Cham.). Phoenicaceae. **Palm.**

A palm, native to Brazil, with an unarmed trunk about 20 feet high and 1 foot in diameter, bearing a crown of plumelike leaves 12 to 15 feet long. The fruit is a pale-orange drupe about the size of a large acorn, inclosing a bony seed which has three eyes near the base.

For previous introduction see 91773.

94766. BAUHINIA CANDICANS Benth. Caesalpiniaceae.

A thorny shrub, native to Uruguay and Argentina, with leaves heart-shaped at the base and cleft nearly to the middle at the apex. The creamy white flowers are borne in whitish tomentose racemes, and the petals are nearly 3 inches long.

94767. BIGNONIA TUBIFLORA Hort. Bignoniaceae.

A name for which a place of publication and a description have not been found.

94768. BLEPHAROCALYX TWEEDIEI (Hook. and Arn.) Berg. Myrtaceae.

A subtropical tree, native to Uruguay, with lanceolate acute leaves and axillary flowers in pairs.

94769. ANNESLIA TWEEDII (Benth.) Lindm. (*Calliandra tweedii* Benth.). Mimosaceae.

A low tropical tree with bipinnate leaves made up of three to four pairs of very small hairy linear-oblong leaflets, and globose flower heads with rather showy purplish stamens. Native to British Guiana.

94770. CEDRELA ODORATA L. Meliaceae. **Cigarbox-cedar.**

A tree, sometimes 100 feet tall, with handsome bright-green compound leaves 10 to 20 inches long. Native to the West Indies. This is the tree which produces the cigarbox wood of Cuba and should be tried in Florida as a possible timber tree.

For previous introduction see 59302.

94771. CHOMELIA TUBIFLORA Hort. Rubiaceae.

A name for which a place of publication and a description have not been found.

94772. CHUSQUEA CUMINGII Nees. Poaceae. **Bamboo.**

A tall bamboo, native to the vicinity of Valparaiso, Chile. The sessile lanceolate leaves, over an inch long, have ser-

94763 to 94786—Continued.

rulate scabrous margins and are rigid and green. The panicles are about an inch long.

94773. DAUBENTONIA TRIPETII Poit. Fabaceae.

A shrub or small tree, native to Argentina, with pinnately compound leaves which are dull green above and paler beneath. The rather large orange-red flowers are borne in drooping racemes.

94774. HOLOCALYX BALANSAE Micheli. Caesalpiniaceae.

A shrub, native to Paraguay, about 15 feet high, with leathery pinnate leaves about 6 inches long, consisting of 20 to 40 pairs of oblong leaflets. The inconspicuous flowers are in short axillary racemes, and the short pod is thick and fleshy.

94775. ILEX PARAGUARIENSIS St. Hil. Aquifoliaceae. **Yerba maté.**

A tender evergreen Paraguayan holly, the leaves of which are dried and used to make the beverage called maté, or Paraguay tea.

94776. LONCHOCARPUS NEUROSCAPHA Benth. Fabaceae. **Lancepod.**

An evergreen tree, native to Uruguay, with alternate pinnate leaves and racemes of purplish pealike flowers.

For previous introduction see 66810.

94777 to 94779. MIMOSA spp. Mimosaceae.

94777. MIMOSA PIGRA L. (*M. asperata* L.).

An erect, thorny shrub 3 to 6 feet high with bipinnate leaves made up of linear leaflets less than one-fourth of an inch long and heads of pink flowers. It is native to Mexico and is also found in tropical America and Africa.

94778. MIMOSA CARINATA Griseb.

A subtropical spiny tree with bipinnate leaves consisting of 1 or 2 pairs of pinnae and 12 to 24 pairs of minute pinnules. The purple and green plaid flowers are in small heads.

94779. MIMOSA SPEGAZZINII Pirotta.

A much-branched, climbing shrub with recurved spines, sensitive bipinnate leaves 2 to 3 inches long, and globular heads, about an inch in diameter, of rose-purple flowers. It is native to Argentina.

94780. MYROXYLON SERRATUM Krug and Urban. Flacourtiaceae.

A small tree with bright-green papery obtuse leaves about 5 inches long and inconspicuous flowers in small axillary umbels. Native to Montserrat, British West Indies.

94781. PIPTADENIA EXCELSA (Griseb.) Lille. Mimosaceae.

A tree, sometimes nearly 100 feet high, with 15 to 20 pairs of leaflets in each leaf and spikes of flowers 2 to 3 inches long. The pods are linear. The rosy wood, which resembles that of *Piptadenia macrocarpa*, is tough and straight grained and is used for carpenter work.

For previous introduction see 88243.

94782. LEUCAENA GLAUCA (L.) Benth. Mimosaceae.

A shrub or tree up to 30 feet high with a smooth trunk, bipinnate leaves made up of four to eight pinnae bearing 10 to

94763 to 94786—Continued.

20 pairs of narrowly lanceolate leaflets half an inch long, and globular heads of small white flowers. The young branches are used as forage.

For previous introduction see 88156.

94783. SAPINDUS DIVARICATUS Willd. Sapindaceae. **Soapberry.**

A tropical American tree 12 to 30 feet high, with smooth gray bark and abruptly pinnate leaves composed of three to six pairs of ovate-lanceolate leaflets. The small white flowers are in terminal panicles about 1 foot long.

94784. SCHINUS TEREBINTHIFOLIUS AROIERA (Vell.) L. Marchand. Anacardiaceae.

A shrub 3 to 10 feet high or sometimes a small tree 20 feet high. The variable membranous leaves are unequally pinnate and are composed of two to four pairs of oblong to obovate-oblong leaflets 2 to 3 inches long. The small white flowers are followed by scarlet berries in panicles 2 to 4 inches in length.

94785. VITEX sp. Verbenaceae.

Taruma.

94786. ZEA MAYS L. Poaceae. **Corn.**

94787 to 94922. HORDEUM spp. Poaceae. **Barley.**

From the Union of Soviet Socialist Republics. Seeds obtained by J. G. Dickson, professor of plant pathology, College of Agriculture, Madison, Wis., and agent in cereal investigations, United States Department of Agriculture. Received in November and December, 1930. Numbered in October, 1931.

94787. HORDEUM DEFICIENS Steud. **Deficient barley.**

No. 510. Spring barley from Kharkov.

94788. HORDEUM DEFICIENS NUDIDEFICIENS (Koern.) Harlan. **Deficient barley.**

No. 339. From Otrada, Kubanska.

94789 to 94791. HORDEUM DISTICHON NIGRICANS Seringe. **Two-rowed barley.**

94789. No. 225. From Kharkov. A smooth-awned, rust-resistant variety.

94790. No. 308. From the steppes of Georgia. A black winter barley.

94791. No. 321. From Otrada, Kubanska. A smooth-awned, rust-resistant spring barley.

94792 to 94794. HORDEUM DISTICHON NUDUM L. **Two-rowed barley.**

94792. No. 50. From the steppes of Georgia. A black winter barley.

94793. No. 322. From Otrada, Kubanska. A medium rust-resistant form.

94794. No. 522. From Kharkov. A spring barley.

94795 to 94847. HORDEUM DISTICHON PALMELLA Harlan. **Two-rowed barley.**

94795. No. 29. From the experiment fields at Derbent.

94796. No. 56. From the steppes of Georgia at 4,000 feet altitude. A winter variety with stiff straw.

94797. No. 64. From southeast of Erivan at 4,000 feet altitude, in a very dry region.

94787 to 94922—Continued.

94798. No. 311. From Odessa. A high-yielding spring barley of good quality.

94799. No. 319. From Otrada, Kubanska. A rust-resistant barley.

94800. No. 320. A rust-resistant spring barley.

Nos. 94801 to 94804 were collected at Otrada, Kubanska.

94801. No. 325. Rust resistant.

94802. No. 332.

94803. No. 335. A smooth-awned spring barley which is medium rust resistant.

94804. No. 336. A rust-resistant form.

94805. No. 347. From Kosbeck. A 2-rowed barley.

94806. No. 348. From the Kosbeck Valley, trans-Caucasian Mountains, at 3,000 feet altitude.

Nos. 94807 to 94819 were collected by Doctor Müller, of Biologische Reisanstalt für Landand Forsbwirtschft, in northeastern Turkey in 1928 and grown at Baku in 1930.

94807. No. 461.
94808. No. 478.
94809. No. 482.
94810. No. 484.
94811. No. 489.
94812. No. 490.
94813. No. 491.
94814. No. 494.
94815. No. 495.
94816. No. 498.
94817. No. 505.
94818. No. 506.
94819. No. 507.

94820. No. 508. From Kharkov.

94821. No. 511. From Odessa.

Nos. 94822 to 94838 were collected at Kharkov.

94822. No. 512.
94823. No. 513.
94824. No. 514.
94825. No. 515.
94826. No. 516.
94827. No. 517.
94828. No. 518.
94829. No. 519.
94830. No. 520.
94831. No. 521.
94832. No. 525.
94833. No. 526.
94834. No. 527.
94835. No. 528.
94836. No. 529.
94837. No. 530.
94838. No. 531.

94839. No. 533. Collected near Bristol, England. A small-headed type.

94840. No. 534. Collected near Bristol, England. The native type.

94841. No. 535. Collected near Exeter, England. A large-headed type.

94842. No. 536. Collected near Bristol, England. A small-headed type.

94843. No. 537. Collected near Bristol, England. An erect type.

94844. No. 538. Variety *Chevalier*. From Staunton, England.

94845. No. 539. From Exeter, England. A form with heavy heads, free from disease.

94846. No. 540. From Cambridge, England. A large-headed type.

94787 to 94922—Continued.

94847. No. 541. Collected near Bristol, England.

Nos. 94848 to 94852 were collected at Otrada, Kubanska.

94848. HORDEUM INTERMEDIUM CORNUTUM (Schrad.) Harlan.

No. 309.

94849. HORDEUM INTERMEDIUM MORTONI Koern.

No. 331. Spring barley.

94850. HORDEUM SPONTANEUM C. Koch.

No. 317.

94851. HORDEUM VULGARE COELESTE L. **Six-rowed barley.**

No. 312–C.

94852. HORDEUM VULGARE DUPLINIGRUM Koern.

No. 318. A black barley with smooth awns.

94853 to 94856. HORDEUM VULGARE NIGRUM (Willd.) Beaven. **Six-rowed barley.**

94853. No. 1. Black barley collected on the dry plains east of Baku.

94854. No. 24. Collected at Gonzali on a native's farm.

94855. No. 30. *Dargastan*. A black winter barley from the experiment station at Asafute.

94856. No. 57. Black winter barley from the steppes of Georgia.

94857 to 94921. HORDEUM VULGARE PALLIDUM Seringe. **Six-rowed barley.**

94857. No. 1. White barley from the dry plains east of Baku.

Nos. 94864 to 94881 were collected at at Otrada, Kubanska.

94858. No. 26. A medium-late, rust-resistant winter barley.

94859. No. 27. A rust-resistant winter barley.

94860. No. 28. A rust-resistant winter barley.

94861. No. 30. *Dargastan*. A white winter barley.

94862. No. 32. White winter barley from the steppes of Georgia.

94863. No. 307. From the steppes southeast of Tiflis.

Nos. 94864 to 94881 were collected at Otrada, Kubanska.

94864. No. 312–a. A high-yielding, winter-resistant barley.

94865. No. 312–b. A high-yielding, winter-resistant barley.

94866. No. 313. A smooth-awned barley, medium rust resistant and medium late.

94867. No. 314. Rust resistant.

94868. No. 315. Japanese type, medium rust resistant.

94869. No. 316. A rust-resistant spring barley.

94870. No. 323. A rust-resistant type.

94871. No. 324. A rust-resistant type.

94787 to 94922—Continued.

94872. No. 326. A rust-resistant spring barley with very stiff straw.

94873. No. 327. Japanese type, rust resistant.

94874. No. 328. *Irkutsk.* A rust-resistant type.

94875. No. 329. A rust-resistant spring barley.

94876. No. 330. A rust-resistant spring barley.

94877. No. 333. Spring barley.

94878. No. 334. A rust-resistant spring barley.

94879. No. 337. A medium rust-resistant spring barley.

94880. No. 338. Spring barley.

94881. No. 340. Spring barley.

Nos. 94882 to 94917 are a collection of spring barleys made by Doctor Müller, of Biologische Reisanstalt für Landamt, Forstwirtschft, in northeastern Turkey in 1928 and grown in Baku in 1930.

94882. No. 459.
94883. No. 460.
94884. No. 462.
94885. No. 463.
94886. No. 464.
94887. No. 465.
94888. No. 466.
94889. No. 467.
94890. No. 468.
94891. No. 469.
94892. No. 470.
94893. No. 471.
94894. No. 472.
94895. No. 473.
94896. No. 474.
94897. No. 475.
94898. No. 476.
94899. No. 477.
94900. No. 479.
94901. No. 480.
94902. No. 481.
94903. No. 483.
94904. No. 485.
94905. No. 486.
94906. No. 487.
94907. No. 488.
94908. No. 492.
94909. No. 493.
94910. No. 496.
94911. No. 497.
94912. No. 499.
94913. No. 500.
94914. No. 501.
94915. No. 502.
94916. No. 503.
94917. No. 504.

Nos. 94918 to 94920 were collected at Kharkov.

94918. No. 509.

94919. No. 523.

94920. No. 524.

94921. No. 532–b. From the Valki Experiment Station.

94922. HORDEUM DISTICHON PALMELLA Harlan. Two-rowed barley.

No. 532–a. From the Valki Experiment Station.

94923 to 94936.

From the Union of Soviet Socialist Republics. Seeds presented by M. P. Petrov, director of the Repetek Sand-Desert Station (Turkmenistan). Received October 16, 1931.

94923. AMMODENDRON CONOLLYI Bunge. Fabaceae.

An evergreen silky-leaved Siberian shrub used as a sand binder.

For previous introduction see 92962.

94923 to 94936—Continued.

94924. ARISTIDA PENNATA KARELINI Trin. and Rupr. Poaceae. Grass.

A perennial grass of possible value as a forage crop.

For previous introduction see 92966.

94925 and 94926. ASTRAGALUS AMMODENDRON Bunge. Fabaceae.

A large shrub native to sandy places near the Caspian Sea. The pinnate leaves have three leaflets, and the small purplish flowers are in short racemes.

94925. Variety *confirmans.*

94926. Variety *paucijugus.*

94927 to 94932. CALLIGONUM spp. Polygonaceae.

94927. CALLIGONUM ARBORESCENS Litv.

A drought-resistant shrub 10 feet high, said to be a good sand binder. It is found in the region of the Caspian Sea.

For previous introduction see 73185.

94928. CALLIGONUM CAPUT-MEDUSAE Schrenk.

A leafless shrub with dichotomous branches, small reddish flowers in the axils of the sheaths, and nutlike fruits covered with filamentous reddish spines. Possibly of value as an ornamental in desert regions and useful as a sand binder. It is native to western Asia.

For previous introduction see 92971.

94929. CALLIGONUM CAPUT-MEDUSAE RUBICUNDUM Herder.

Similar to 94928, but much redder in all its parts.

94930. CALLIGONUM COMOSUM L'Her.

A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small ovate densely spiny nutlike fruits. Native to the eastern Mediterranean region.

For previous introduction see 92972.

94931. CALLIGONUM ERIOPODUM Bunge.

A slender-branched shrub with whitish branchlets and linear-subulate minute leaves which are early deciduous. Native to Turkistan.

For previous introduction see 92973.

94932. CALLIGONUM SETOSUM Litv.

A leafless shrub much like *C. caput-medusae,* but the filaments on the fruits are brownish and are longer and more slender. It is native to the Caspian region.

For previous introduction see 92974.

94933. CAREX PHYSODES Bieb. Cyperaceae.

A perennial sedge usually about 6 inches high, rarely more, native to the sandy deserts of Turkistan, with filiform leaves and panicles of brownish globose membranous perigynia, or sacs, half an inch long.

94934. EPHEDRA ALATA Decaisne. Gnetaceae.

A tall freely branching shrub with rough green equisetumlike branches, small scalelike leaves, and inconspicu-

94923 to 94936—Continued.

ous flowers, native to Arabia and northern Africa. Of value as a possible source of ephedrine.

For previous introduction see 92980.

94935. EREMOSPARTON FLACCIDUM Litv. Fabaceae.

A bushy tree about 15 feet high, native to sandy places in the trans-Caspian region. The branchlets are thread-like and limp, and the small flowers are dark violet.

For previous introduction see 92981.

94936. SMIRNOWIA TURKESTANA Bunge. Fabaceae.

A much-branched shrub with long, almost filiform branches and leaves reduced to a single obovate leaflet. Native to the deserts of Turkistan.

For previous introduction see 92991.

94937 and 94938. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

From Australia. Seeds presented by H. Wenholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received October 16, 1931.

94937. *Baringa.*

94938. *Yok.*

94939 to 95046. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From the Union of Soviet Socialist Republics. Seeds presented by V. Gorbonova, Lenin Academy of Agricultural Sciences, Institute of Plant Industry, Leningrad. Received October 16, 1931.

An assortment of different forms of wild pistache from the Kushka region (Turkmenistan). The seeds are small, but the plants are very hardy, being able to withstand temperatures as low as 30° C.

94939. No. 201.	**94961.** No. 474.
94940. No. 213.	**94962.** No. 480.
94941. No. 215.	**94963.** No. 481.
94942. No. 260.	**94964.** No. 495.
94943. No. 283.	**94965.** No. 496.
94944. No. 341.	**94966.** No. 499.
94945. No. 342.	**94967.** No. 512.
94946. No. 352.	**94968.** No. 515.
94947. No. 363.	**94969.** No. 516.
94948. No. 369.	**94970.** No. 531.
94949. No. 370.	**94971.** No. 532.
94950. No. 374.	**94972.** No. 537.
94951. No. 382.	**94973.** No. 547.
94952. No. 389.	**94974.** No. 548.
94953. No. 401.	**94975.** No. 553.
94954. No. 404.	**94976.** No. 562.
94955. No. 410.	**94977.** No. 573.
94956. No. 442.	**94978.** No. 585.
94957. No. 451.	**94979.** No. 600.
94958. No. 459.	**94980.** No. 605.
94959. No. 463.	**94981.** No. 607.
94960. No. 470.	**94982.** No. 608.

94939 to 95046—Continued.

94983. No. 614.	**95015.** No. 1070.
94984. No. 626.	**95016.** No. 1083.
94985. No. 632.	**95017.** No. 1085.
94986. No. 638.	**95018.** No. 1096.
94987. No. 639.	**95019.** No. 1104.
94988. No. 642.	**95020.** No. 1111.
94989. No. 649.	**95021.** No. 1117.
94990. No. 655.	**95022.** No. 1119.
94991. No. 660.	**95023.** No. 1121.
94992. No. 667.	**95024.** No. 1129.
94993. No. 680.	**95025.** No. 1131.
94994. No. 716.	**95026.** No. 1144.
94995. No. 724.	**95027.** No. 1163.
94996. No. 726.	**95028.** No. 1164
94997. No. 926.	**95029.** No. 1168.
94998. No. 929.	**95030.** No. 1172.
94999. No. 955.	**95031.** No. 1178.
95000. No. 966.	**95032.** No. 1181.
95001. No. 971.	**95033.** No. 1185.
95002. No. 979.	**95034.** No. 1191.
95003. No. 981.	**95035.** No. 1207.
95004. No. 984.	**95036.** No. 1211.
95005. No. 986.	**95037.** No. 1224.
95006. No. 991.	**95038.** No. 1229.
95007. No. 994.	**95039.** No. 1238.
95008. No. 996.	**95040.** No. 1248.
95009. No. 1000.	**95041.** No. 1252.
95010. No. 1008.	**95042.** No. 1265.
95011. No. 1029.	**95043.** No. 1274.
95012. No. 1039.	**95044.** No. 1280.
95013. No. 1055.	**95045.** No. 1290.
95014. No. 1067.	**95046.** No. 1308.

95047 and 95048.

From Cuba. Seeds presented by Mrs. F. S. Earle, Herradura. Received October 16, 1931.

95047. COCCOTHRINAX ARGENTEA (Roem. and Schult.) Sarg. Phoenicaceae. **Silver palm.**

Guano blanco. A dwarf palm with fan-shaped leaves which are silvery gray beneath. Native to the West Indies.

For previous introduction see 81586.

95048. PAUROTIS WRIGHTII (Griseb. and Wendl.) Britton. Phoenicaceae. **Palm.**

Guano prieto. A tree often with several erect trunks 25 to 40 feet high, native to southern Florida and the West Indies. The half-orbicular, fan-shaped leaves, which spread in all directions, are yellow green above and blue green beneath, and the segments are linear lanceolate. The drooping spadix, 3 to 5 feet long, bears yellow-green flowers followed by lustrous black fruits one-third inch in diameter.

95049 to 95063. PRUNUS spp. Amygdalaceae.

From the Union of Soviet Socialist Republics. Seeds presented by V. P. Alekseev, plant introducer, Sukhum Subtropical

95049 to 95063—Continued.

Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus. Received October 17, 1931.

95049 to 95058. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. Plum.

95049. No. 41200. From the city of Sukhum. A large tree over 30 feet high, which is a prolific cropper. The medium-sized fruits, 1½ by 1¾ inches, are slightly oval. When mature the color is very dark violet, almost black, and the mild subacid yellow-red flesh is very pleasant.

95050. No. 41201. From Poti, Black Sea coast. A large spreading tree with small dark-red oval fruits. A very common form in this region.

95051. No. 41203. From Poti, Black Sea coast. A large, vigorous tree with small red oval fruits which are acid.

95052. No. 41202. From Poti, Black Sea coast. A large spreading tree with medium-sized oval fruits of violet color with an acid flavor.

95053. No. 41205. From the city of Sukhum. The fruits are small oblong oval, light yellow in color, with sweet flesh of very pleasant flavor.

95054. No. 41204. From Poti, Black Sea coast. A medium-sized tree; the fruits are oval, yellow with red cheek, medium sized; flesh yellow, subacid, mild, and of pleasant flavor.

Nos. 95055 to 95058 are variety *pontica*. This variety is distributed through the lowlands and middle mountainous parts of Adjaria, West Grusia, and Abkhasia (west Transcaucasia), both in the wild and cultivated state. The following descriptions are of the four best cultivated forms.

95055. No. 37804. Collected in the village of Agoma, Adjaria, in June, 1930. A large ovate red fruit with rough skin, densely dotted, with heavy bloom. The flesh is at first yellow, but becomes red when the fruit is fully ripe. It is very juicy, acid, and almost a freestone.

95056. No. 37806. Collected in Adjaria in July, 1930. Large violet fruit, slightly ovate, with the skin fairly thick with bloom and dense light dots. The flesh is red, subacid, and of very pleasant flavor.

95057. No. 37803. Collected at Agoma, Adjaria, in June, 1930. The large fruits are broadly cylindrical in form and red-violet in color. The skin is rough with heavy bloom nearly without dots. The flesh is red subacid and nearly a freestone.

95058. No. 37805. Collected at Agoma, Adjaria, in July, 1930. The large ovate yellow fruits are slightly unsymmetrical and slightly depressed on both sides. The skin is yellow and heavily bloomed. The flesh is light yellow, juicy, and subacid.

95059 to 95063. PRUNUS HYRCANICA Hort.

A collection of plums found by V. P. Jekimov in the irrigated orchards of Ordubat and Migri, cities on the Aras River, near the Persian frontier. They have no names, and the small-fruited varieties are propagated by seeds, also by grafting and budding.

95049 to 95063—Continued.

95059. No. 37802. *Migri*, apple shaped. Fruit medium sized, cylindrical, slightly broader at the base, slightly flattened at the sides, deep suture. Color red. Flesh greenish yellow, subacid, fairly juicy. Stone nearly cling. Ripens late in June.

95060. No. 37798. The large green fruit is flattened on both sides, from the broader side round-quadrangular in form; both base and tip depressed; deep suture on the broad side. Skin smooth, glossy green with translucent greenish spots. Flesh light green, of pleasant subacid flavor, fairly juicy, stone cling. Ripens in the middle of July.

95061. No. 37800. Small heart-shaped fruits nearly globose in form, slightly flattened on the sides, and greenish red or greenish deep pink in color. The slightly acid flesh is greenish yellow tinged with pink, very juicy, and of pleasant flavor. The plum is a clingstone and ripens early in July.

95062. No. 37801. Rose (small).

95063. No. 37799. Large oval yellow fruit with smooth skin, which is glossy greenish yellow with translucent greenish spots; flesh greenish yellow, very juicy, of pleasant subacid flavor. A near clingstone which ripens the middle of July.

95064. CITRUS sp. Rutaceae.

From French Indo-China. Cutting presented by M. Poilane, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received October 21, 1931.

95065. PERESKIA GRANDIFOLIA Haw. Cactaceae. **Bush pereskia.**

From the Canal Zone. Seeds presented by J. E. Higgins, Director, Canal Zone Experiment Gardens, Summit. Received October 21, 1931.

A shrub or tree 6 to 15 feet high, with a short spiny trunk, fleshy branches, oblong leaves 3 to 6 inches long, and terminal clusters of rose-colored to white flowers 1 to 2 inches across. It is native to Brazil.

For previous introduction see 93495.

95066. SORGHUM VULGARE Pers. Poaceae. **Italian broomcorn.**

From Australia. Seeds presented by R. G. May, Bathurst Experiment Farm, Bathurst, New South Wales. Received October 26, 1931.

A variety with white seeds.

95067. RHUS VIMINALIS Ait. Anacardiaceae. **Sumac.**

From the Union of South Africa. Seeds presented by F. Walton Jameson, city engineer, Kimberley. Received October 27, 1931.

Karroo boom. A hardy evergreen tree up to 30 feet high with a spread of the same distance, which grows in semiarid regions at over 4,000 feet altitude. It grows rapidly from cuttings or seeds if the ground is kept moist until germination starts. The flexible wood is considered excellent for yokes, keys, tobacco pipes, and furniture;

95067—Continued.

and fence posts made of it have been found in good condition 25 years after they have been set in the ground. Sheep and goats browse on the foliage, and the sweetish fruits are eaten by children and poultry. The *karroo boom* makes a beautiful street and shade tree, being hardier and more ornamental than *Schinus molle,* which it resembles in habit.

For previous introduction see 46810.

95068 to 95070. PISTACIA spp. Anacardiaceae. **Pistache.**

From Syria, Asia Minor. Seeds collected by V. M. Maroukian, Bureau of Plant Industry. Received October 27, 1931.

95068. PISTACIA TEREBINTHUS PALESTINA (Boiss.) Engl.

No. 3. Collected September 12, 1931, on hills around Betias, Syria. A small tree or bush from 4 to 6 feet high. It grows wild in limestone soil between 1,500 and 2,000 feet altitude. The fruit is white at first, gradually becoming dark red. The growers here use it as a stock on which to graft the better varieties of cultivated pistache.

For previous introduction see 29476.

95069. PISTACIA VERA L.

No. 1. Collected September 15, 1931, from gardens near Aleppo, Syria. A tree between 25 and 30 feet high, found in dry sandy loam. In this region no irrigating or watering is done; there is little rain and plenty of sunshine, and the climate is warm.

95070. PISTACIA VERA L.

No. 2. Collected September 15, 1931, from gardens near Aleppo, Syria. A tree between 25 and 30 feet high, found on sandy limestone soil, well drained and with a southern exposure. No irrigating is done, but a dry soil mulch is maintained.

95071 and 95072.

From the Union of South Africa. Bulbs presented by Mrs. J. Norman Henry, Gladwyne, Pa. Received October 28, 1931.

95071. IXIA SCARIOSA Thunb. Iridaceae.

A bulbous plant, native to southern Africa, with two to three short sword-shaped basal leaves and flower stems 1 foot high, bearing lax spikes of three to six funnel-shaped reddish or lilac flowers 1 inch long.

95072. HOMERIA COLLINA (Thunb.) Vent. Iridaceae.

A perennial plant, native to the Cape of Good Hope, with a globose corm covered with fibrous coats, and usually one convolute-concave narrow leaf, much longer than the stem. The erect stem bears one or more clusters of handsome red-orange flowers grouped in twos or threes.

For previous introduction see 48676.

95073 and 95074.

From Australia. Seeds presented by Ida Richardson, Perth, Western Australia. Received October 28, 1931.

95073. VERTICORDIA CHRYSOSTACHYS Meissn. Myrtaceae.

95073 and 95074—Continued.

An erect shrub 4 to 6 feet high, with spreading branches and obovate to orbicular, thick scurfy leaves. The calyx and corolla of the yellow flowers are both deeply cut into ciliate lobes, and the flowers are borne in the axils of the leaves near the ends of the branches. Native to Western Australia.

95074. VERTICORDIA GRANDIS Drumm. Myrtaceae.

A stout shrub 3 to 6 feet high, with erect or spreading branches and orbicular, half-stem-clasping leaves one-half inch in diameter. The flowers are axillary along the branches, each forming, when fully open, a densely plumose crimson tuft fully an inch across. Native to Western Australia.

95075. LITCHI CHINENSIS Sonner. Sapindaceae. **Lychee.**

From China. Plants growing at the United States Plant Introduction Garden, Glenn Dale, Md., under the Bell No. 2087. Numbered in October, 1931, for convenience in distribution.

95076. CRATAEGUS AZAROLUS L. Malaceae.

From Syria, Asia Minor. Seeds collected by V. M. Maroukian, Bureau of Plant Industry. Received October 29, 1931.

Aloge. Collected near Aleppo. A small wild tree from 9 to 12 feet high, which is grown both for its fruit and as an ornamental. The small yellow or reddish fruits, about an inch in diameter, are slightly sour and are eaten raw or made into preserves. The tree is native on soil where calcium carbonate predominates.

95077. LIVISTONA MARIAE F. Muell. Phoenicaceae. **Palm.**

From Australia. Seeds presented by the Council for Scientific and Industrial Research, Canberra. Received October 29, 1931.

An erect palm with fan-shaped leaves divided into narrow plicate segments. Found in Palm Valley in the Macdonnell Range, Central Australia.

For previous introduction see 45980.

95078 to 95084.

From the Union of South Africa. Seeds presented by the director, National Botanic Gardens, Kirstenbosch, Newlands, Cape Province. Received October 30, 1931.

95078. MORAEA BICOLOR (Sweet) Steud. Iridaceae.

An irislike perennial with a short creeping rhizome, fan-shaped basal rosettes of lanceolate leaves 1 to 2 feet long, and flower stems as tall as the leaves. The yellow flowers are 2 inches across and have brown spots on the outer segments. Native to southern Africa.

95079. MORAEA POLYSTACHYA (Thunb.) Ker. Iridaceae.

A bulbous plant 2 to 3 feet high, with about four linear leaves 1 to 2 feet long and lax panicles of 5 to 20 clusters of lilac irislike flowers 1 to 2 inches across. There is a bright yellow spot at the base of each outer segment of the perianth. Native to southern Africa.

95078 to 95084—Continued.

95080 to 95084. URSINIA spp. Asteraceae.

95080. URSINIA ANTHEMOIDES (L.) Gaertn.

An erect annual with bipinnately divided leaves, the ultimate lobes being linear filiform. The daisylike flowers are borne on the nodding ends of long naked peduncles, and the rays are yellow above and coppery brown beneath. Native to southern Africa.

95081. URSINIA FOENICULACEA (Jacq.) Poir.

A nearly glabrous erect annual with bipinnately divided leaves resembling those of fennel. The daisylike flowers are borne on naked peduncles, and the rays are yellow on both sides. Native to southern Africa.

95082. URSINIA SCAPIFORMIS (DC.) N. E. Brown.

A species which closely resembles *U. nudicaulis*, but differs in being a smaller and more slender plant, in having more numerous and sharper-pointed leaf lobes and smaller flower heads. Native to southern Africa.

95083. URSINIA NUDICAULIS (Thunb.) N. E. Brown.

A subshrubby perennial with very short tufted densely leafy stems 1 to 2 inches long and pinnately divided leaves the same length. The yellow flowers are borne on slender peduncles 8 to 10 inches long. Native to southern Africa.

95084. URSINIA VERSICOLOR (DC.) N. E. Brown.

An erect annual which closely resembles *U. anthemoides*, but the leaves are simply pinnate, and the ray flowers are purple at the base, paler above, and turn purple with age. Native to southern Africa.

95085 to 95088.

From Cuba. Seeds presented by Dr. Robert M. Grey, Harvard Botanic Garden, Soledad, Cienfuegos. Received November 2, 1931.

95085. ARTABOTRYS UNCINATUS (Lam.) Merr. Annonaceae. **Fragrant tailgrape**

A half-scandent shrub with long, slender, drooping branches and greenish flowers. The fruits are ovoid, with a pointed slightly curved apex, and are yellowish when ripe. This plant is very highly esteemed by the Chinese because of the rich fragrance of the flowers and fruits. It is commonly planted in their monasteries.

95086. DIOSPYROS DISCOLOR Willd. Diospyraceae. **Mabolo.**

The *mabolo* is a medium-sized Philippine tree of vigorous growth, with shining leaves 5 to 10 inches long, pubescent beneath. The velvety dull reddish thin-skinned fruits, 3 inches long and nearly 4 inches in diameter, have firm rather dry sweet white flesh of rather indefinite flavor, also four to eight large seeds. Notwithstanding its size and attractive appearance, it has never gained favor with Europeans, although very popular with the natives.

For previous introduction see 53555.

95085 to 95088—Continued.

95087. MALPIGHIA GLABRA L. Malpighaceae. **Barbados-cherry.**

A tropical American shrub up to 6 feet high, with slender branches and ovate to elliptic entire leaves. The rose-red flowers, nearly an inch across, have fringed petals and are borne in umbels of three to five. The acid scarlet berries, the size of cherries, are used for jams and preserves.

95088. LIVISTONA HOOGENDORPII Andre. Phoenicaceae. **Palm.**

A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles 3 to 5 feet long, red-brown at the base and becoming olive green near the leaf. The leaves are made up of 10 to 12 plicate pendulous segments with five to seven acute lobes at the apex.

For previous introduction see 91783.

95089 and 95090.

From Straits Settlements. Seeds presented by R. E. Holttum, director, Botanic Garden, Singapore. Received November 2, 1931.

95089. FICUS ALBA Reinw. Moraceae. **Fig.**

A shrub or small tree, native to the Malay Archipelago, with papery leaves that are white tomentose beneath. The adult leaves are lanceolate serrate and about 5 inches long, but on young plants they are 10 inches long, cordate, and often three lobed. The egg-shaped fruits, produced in sessile pairs, are about one-fourth inch in diameter and are orange until quite ripe, when they become red.

For previous introduction see 67567.

95090. FICUS CHRYSOCARPA Reinw. Moraceae. **Fig.**

A low yellow-hairy shrub about 4 feet high, with oblanceolate serrulate leaves 3 inches long, native to the Malay Archipelago. The oblong to globose fruits, borne in axillary pairs, are half an inch in diameter and are covered with golden-yellow hairs until quite ripe, when they turn red.

95091 to 95308. HORDEUM spp. Poaceae. **Barley.**

From the Union of Soviet Socialist Republics. Seeds collected by J. G. Dickson, professor of plant pathology, College of Agriculture, Madison, Wis., and agent in cereal investigations, United States Department of Agriculture. Received November 5, 1931.

Selections made from the Vavilov collection at the Valki Experiment Station, near Kharkov, Ukraine. Most of the material selected showed marked resistance to cold, both in the seedling and later period of growth.

95091 to 95110. HORDEUM DEFICIENS Steud. **Deficient barley.**

95091. No. 218.
95092. No. 287.
95093. No. 288.
95094. No. 404.
95095. No. 405.
95096. No. 406.
95097. No. 407.
95098. No. 415.
95099. No. 418.
95100. No. 419.
95101. No. 433.
95102. No. 439.

95091 to 95308—Continued.

95103. No. 726.
95104. No. 727.
95105. No. 729.
95106. No. 731.
95107. No. 732.
95108. No. 733.
95109. No. 735.
95110. No. 738.

95111 to 95124. HORDEUM DEFICIENS STEUDELII (Koern.) Harlan. Deficient barley.

95111. No. 421.
95112. No. 434.
95113. No. 686.
95114. No. 695.
95115. No. 696.
95116. No. 698.
95117. No. 704.
95118. No. 709.
95119. No. 712.
95120. No. 713.
95121. No. 720.
95122. No. 721.
95123. No. 725.
95124. No. 740.

95125 to 95130. HORDEUM DISTICHON NIGRICANS Seringe. Two-rowed barley.

95125. No. 154.
95126. No. 168.
95127. No. 169.
95128. No. 249.
95129. No. 341.
95130. No. 744.

95131 to 95148. HORDEUM DISTICHON NUDUM L. Two-rowed barley.

95131. No. 105.
95132. No. 106.
95133. No. 107.
95134. No. 108.
95135. No. 115.
95136. No. 116.
95137. No. 139.
95138. No. 140.
95139. No. 145.
95140. No. 148.
95141. No. 150.
95142. No. 151.
95143. No. 294.
95144. No. 751.
95145. No. 753.
95146. No. 754.
95147. No. 755.
95148. No. 770.

95149 to 95213. HORDEUM DISTICHON PALMELLA Harlan. Two-rowed barley.

95149. No. 109.
95150. No. 133.
95151. No. 134.
95152. No. 146.
95153. No. 156.
95154. No. 157.
95155. No. 158.
95156. No. 159.
95157. No. 160.
95158. No. 161.
95159. No. 170.
95160. No. 184.
95161. No. 185.
95162. No. 187.
95163. No. 194.
95164. No. 208.
95165. No. 210.
95166. No. 216.
95167. No. 219.
95168. No. 220.
95169. No. 221.
95170. No. 223.
95171. No. 224.
95172. No. 226.
95173. No. 228.
95174. No. 229.
95175. No. 232.
95176. No. 233.
95177. No. 242.
95178. No. 244.
95179. No. 246.
95180. No. 248.
95181. No. 263.
95182. No. 264.
95183. No. 267.
95184. No. 295.
95185. No. 296.
95186. No. 305.
95187. No. 307.
95188. No. 311 (NBW).
95189. No. 312.
95190. No. 314.
95191. No. 315.
95192. No. 317.
95193. No. 329.

95091 to 95308—Continued.

95194. No. 330.
95195. No. 331.
95196. No. 332.
95197. No. 333.
95198. No. 334.
95199. No. 335.
95200. No. 338.
95201. No. 339.
95202. No. 349.
95203. No. 353.
95204. No. 354.
95205. No. 360.
95206. No. 362.
95207. No. 375.
95208. No. 426.
95209. No. 746.
95210. No. 761.
95211. No. 762.
95212. No. 765.
95213. No. 768.

95214. HORDEUM VULGARE PALLIDUM Seringe. Six-rowed barley.

No. 790.

95215 to 95221. HORDEUM DISTICHON PALMELLA Harlan. Two-rowed barley.

95215. No. 790–a.
95216. No. 800.
95217. No. 801.
95218. No. 803.
95219. No. 803–a.
95220. No. 805.
95221. No. 808.

95222. HORDEUM VULGARE COELESTE L. Six-rowed barley.

No. 397.

95223 to 95234. HORDEUM VULGARE NIGRUM (Willd.) Beaven. Six-rowed barley.

95223. No. 143.
95224. No. 144.
95225. No. 468.
95226. No. 476.
95227. No. 493.
95228. No. 507.
95229. No. 511.
95230. No. 512.
95231. No. 515.
95232. No. 525.
95233. No. 526.
95234. No. 530.

95235 and 95236. HORDEUM spp.

Abyssinian intermediate barley.

95235. No. 556.
95236. No. 557.

95237 to 95244. HORDEUM VULGARE NIGRUM (Willd.) Beaven. Six-rowed barley.

95237. No. 583.
95238. No. 618.
95239. No. 630.
95240. No. 634.
95241. No. 638.
95242. No. 647.
95243. No. 648.
95244. No. 659.

95245 to 95299. HORDEUM VULGARE PALLIDUM Seringe. Six-rowed barley.

95245. No. 119.
95246. No. 121.
95247. No. 122/744.
95248. No. 123.
95249. No. 136.
95250. No. 173.
95251. No. 174
95252. No. 175.
95253. No. 176.
95254. No. 186.
95255. No. 188.
95256. No. 189.
95257. No. 191.
95258. No. 192.
95259. No. 205.
95260. No. 217.
95261. No. 231.
95262. No. 234.
95263. No. 235.
95264. No. 241.
95265. No. 278.
95266. No. 290.
95267. No. 279.
95268. No. 395.
95269. No. 399.

95091 to 95308—Continued.

95270. No. 399–a.
95271. No. 401–b.
95272. No. 452.
95273. No. 453.
95274. No. 454.
95275. No. 455.
95276. No. 463.
95277. No. 484.
95278. No. 485/1989.
95279. No. 488.
95280. No. 490.
95281. No. 491.
95282. No. 494.
95283. No. 495.
95284. No. 496.
95285. No. 497.
95286. No. 498.
95287. No. 500.
95288. No. 503.
95289. No. 504.
95290. No. 505.
95291. No. 509.
95292. No. 513.
95293. No. 514.
95294. No. 583/2091.
95295. No. 627.
95296. No. 628.
95297. No. 745/411.
95298. No. 771.
95299. No. 786.

95300 to 95308. HORDEUM sp.

Abyssinian intermediate barley.

95300. No. 580.
95301. No. 589 (Pl. Sel. 1).
95302. No. 589 (Pl. Sel. 2).
95303. No. 590.
95304. No. 591.
95305. No. 595.
95306. No. 596.
95307. No. 599.
95308. No. 612.

95309 to 95313.

From France. Seeds presented by A. Gerard, La Fosse, Loir-et-Cher. Received November 7, 1931.

95309. ABIES FIRMA Sieb. and Zucc. Pinaceae. **Momi fir.**

A Japanese tree up to 150 feet high, with a broadly pyramidal crown. The pectinate leaves, over 1 inch long, are firm and are sharply bifid on young plants and emarginate on older ones. The upright cylindrical cones, 4 to 6 inches long, are yellowish green until mature.

95310. MAGNOLIA KOBUS DC. Magnoliaceae. **Kobus magnolia.**

A deciduous tree up to 30 feet high in Japan, but usually shrubby in cultivation. The white flowers, about 4 inches across, appear before the leaves, which are broadly obovate, light green, and 4 to 5 inches long.

95311. MAGNOLIA MACROPHYLLA Michx. Magnoliaceae. **Bigleaf magnolia.**

A round-headed tree up to 50 feet high, native to the southeastern part of the United States. The oblong-obovate leaves are sometimes 3 feet long, and the fragrant creamy-white, cup-shaped flowers are 12 inches across and are followed by rosy globose-ovoid fruits.

95312. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

A tree sometimes 100 feet high, native to China, with the bark of mature trees exfoliating in large scales, leaving white areas, which on the old trees become chalky white.

For previous introduction see 92056.

95309 to 95313—Continued.

95313. PINUS PARVIFLORA Sieb. and Zucc. Pinaceae. **Japanese white pine.**

A dense pyramidal 5-needle pine often 100 feet high, with slender horizontal branches. The leaves are stiff and twisted, forming dense brushlike tufts at the ends of the branchlets. The cones are reddish brown and very decorative. Native to Japan.

For previous introduction see 75681.

95314 to 95344.

From Australia. Seeds presented by Ida Richardson, Perth, Western Australia. Received November 11, 1931.

95314. ACACIA ACUMINATA Benth. Mimosaceae.

A tree 30 to 40 feet high, native to Western Australia, with falcate linear phyllodes 3 to 10 inches long and small flower spikes an inch long. The wood, which has an odor resembling raspberry jam, is dark reddish brown, close-grained, and hard and is suitable for ornamental woodwork and for fence posts.

For previous introduction see 77273.

95315. ACACIA ROSTELLIFERA Benth. Mimosaceae.

A tall shrub or small tree from Western Australia, with graceful glabrous branches. The thick linear-lanceolate phyllodes are 2 to 5 inches long. The few flower heads are in short racemes.

For previous introduction see 48062.

95316. BEAUFORTIA SQUARROSA Schauer. Myrtaceae.

A low straggling shrub 3 to 4 feet high, native to Western Australia. The small leaves, opposite in alternate pairs, are obovate, recurved, and concave. The red flowers, with crimson stamens an inch long, are in dense terminal clusters through which the new shoots grow.

95317. DAMPIERA DIELSII E. Pritz. Goodeniaceae.

A small bushy shrub over a foot high, with prominently angled, long graceful branches. The upper leaves are minute and distant, the lower ones are obovate, rigid, and about an inch long. The small deep-violet flowers are borne singly in the upper axils. Native to Western Australia.

95318. EUCALYPTUS LEHMANNI (Schauer) Preiss. Myrtaceae. **Lehmann gum.**

A large shrub or small tree with rough reddish bark peeling off in irregular sheets. The green-yellow flowers open from July to September. Native to Western Australia.

For previous introduction see 65553.

95319. EREMAEA sp. Myrtaceae.

The eremaeas are bushy Australian shrubs with heathlike leaves and inconspicuous flowers.

95320. GREVILLEA sp. Proteaceae.

The grevilleas are ornamental Australian trees or shrubs with alternate, usually bipinnately compound leaves and axillary or terminal racemes of small flowers, often golden yellow and sometimes of value for honey.

95314 to 95344—Continued.

95321. GYROSTEMON RAMULOSUS Desf. Phytolaccaceae.

An erect bushy somewhat fleshy shrub 3 to 8 feet high, native to Australia. The linear-terete leaves are 1 to 3 inches long, and the small, inconspicuous flowers are axillary on reflexed pedicels.

95322. HAKEA LAURINA R. Br. Proteaceae. **Sea-urchin hakea.**

A tall Australian shrub up to 30 feet high, remarkable for its showy crimson flowers. These are in globular heads, about 2 inches in diameter, from which numerous golden styles protrude an inch or so in all directions.

For previous introduction see 76919.

95323. HAKEA MULTILINEATA Meissn. Proteaceae.

This tall Australian shrub is closely related to *Hakea laurina*, differing only in the venation of the leaves, the oblong shape of the flower cluster, and other minor characters.

For previous introduction see 64484.

95324. HELIPTERUM MANGLESII (Benth.) F. Muell. Asteraceae.

An erect annual 1 to 2 feet high, native to Australia and related to the everlasting flowers. The ovate-oblong leaves clasp the stem with rounded auricles, and the rays of the showy flower heads vary from pale to rich pink, with deep purple at the base.

95325 to 95327. HIBISCUS spp. Malvaceae.

95325. HIBISCUS sp.

The rosemallows are herbs, shrubs, or trees, usually stellate pubescent, with variously divided leaves and large showy flowers.

95326. HIBISCUS DRUMMONDII Turcz.

A slender branching shrub with short rigid stellate hairs. The coarsely toothed leaves are divided into three linear-oblong segments 1 inch long, and the rather large purple flowers are borne in the axils of the upper leaves. It is native to Western Australia.

95327. HIBISCUS HUEGELII Endl.

A tall shrub, native to Australia, with 3 to 5 lobed, coarsely toothed leaves 1 to 3 inches long and large violet-purple flowers.

95328. LACHNOSTACHYS WALCOTTII F. Muell. Verbenaceae.

A tall shrub with all parts covered with a soft cottony wool. The thick oblong-linear leaves, 1 to 2 inches long, have revolute margins, and the small flowers, each a woolly ball one-twelfth inch in diameter, are crowded in dense corymbose panicles. Native to Western Australia.

95329. LESCHENAULTIA LINARIOIDES DC. Goodeniaceae.

A shrub, either prostrate or several feet high, with the branches incurved at the end, slender leaves about one-half inch long, and leafy corymbs of rather large flowers. The tubular corolla is 2-lipped, the upper lobe is short and reddish, while the winged lower lip, nearly an inch long, is yellowish green. It is native to Western Australia.

95314 to 95344—Continued.

95330. MARIANTHUS RINGENS F. Muell. Pittosporaceae.

A climbing shrub with coriaceous entire linear-lanceolate leaves 2 inches long and dense terminal corymbs of red flowers. The oblique petals, nearly an inch long, have an obovate spreading blade and long erect claws. It is native to Western Australia.

95331 to 95333. MELALEUCA spp. Myrtaceae.

95331. MELALEUCA ELLIPTICA Labill.

A tall evergreen shrub, native to Western Australia, with elliptical evergreen leaves half an inch long and cylindrical spikes of large showy red flowers.

For previous introduction see 90713.

95332. MELALEUCA HYPERICIFOLIA J. E. Smith. **Dotted melaleuca.**

A tall glabrous shrub with opposite lanceolate leaves 1 to 2 inches long, dotted beneath. The rich-red flowers are borne in dense spikes 2 inches long and nearly as wide. It is native to Australia.

For previous introduction see 90714.

95333. MELALEUCA RADULA Lindl.

A tall bushy shrub with opposite linear concave leaves up to 2 inches long and rather large pink or white flowers in pairs at the bases of the branchlets. Native to Western Australia.

For previous introduction see 67082.

95334. PILEANTHUS FILIFOLIUS Meissn. Myrtaceae.

An erect branching heathlike shrub with linear terete or 3-angled leaves less than half an inch long. The small axillary flowers are on pedicels half an inch long, and have a yellow calyx and pink petals. It is native to Western Australia.

95335. PITYRODIA OLDFIELDII F. Muell. Verbenaceae.

An erect shrub 2 to 3 feet high, with the branches and leaves covered with a dense woolly tomentum. The opposite leaves, 1 to 2 inches long, are broadly ovate with undulate margins. The pink flowers, nearly an inch long, are in axillary clusters of one to three. Native to Western Australia.

95336. PITYRODIA VERBASCINA F. Muell. Verbenaceae.

A stout erect shrub densely clothed with woolly tomentum, like *Pityrodia oldfieldii*, but the wool is golden or orange red.

95337. PULTENAEA sp. Fabaceae.

The pultenaeas are Australian leguminous shrubs with simple usually alternate leaves and pea-shaped yellow-orange to purple flowers in leafy clusters at the ends of the branches.

95338. EUCARYA SPICATA (R. Br.) Sprag. and Summ. (*Santalum spicatum* A. DC.) Santalaceae.

A shrub or tree from 9 to 25 feet high, with dark-green coriaceous lanceolate to obovate leaves 3 to 5 inches long. The small fragrant flowers are in

95314 to 95344—Continued.

terminal panicles and are followed by yellowish fruits about 1 inch in diameter. It is native to South Australia.

95339. TRICHINIUM EXALTATUM Benth. Amaranthaceae.

A stout perennial 2 to 3 feet high, with thick branches, thick oblong-lanceolate leaves 3 to 5 inches long, and cylindrical spikes 2 inches in diameter of dull-red tubular flowers nearly an inch long. It resembles the princesfeather, to which it is closely related.

95340 to 95343. VERTICORDIA spp. Myrtaceae.

95340. VERTICORDIA GRANDIS Drumm.

For previous introduction and description see 95074.

95341. VERTICORDIA MONADELPHA Turcz.

A much-branched heathlike shrub with linear 3-cornered leaves about one-half inch long. The rather large flowers vary from pink to white, and the calyx and corolla are fringed with long silky hairs one-half inch long. It is native to Western Australia.

95342. VERTICORDIA MUELLERIANA E. Pritz.

A small erect shrub about 2 feet high, with small clasping roundedreniform leaves which have hyaline margins. The very small purple-violet flowers are sessile in the upper axils, forming elongated spikes. Native to sandy places in Western Australia.

95343. VERTICORDIA POLYTRICHA Benth.

An erect bushy shrub with linear 3-cornered or half-round leaves less than one-fourth inch long. The small ciliate flowers are borne in dense leafy terminal corymbs. It is native to Western Australia.

95344. XYLOMELUM ANGUSTIFOLIUM Kipp. Proteaceae.

An erect shrub 6 to 8 feet high, with thick flat linear-lanceolate leaves 4 to 6 inches long, veinless except the midrib. The small silky flowers are borne in loose spikes and are followed by woody ovoid densely tomentose fruits, 2 to 3 inches long, often called "wooden pears."

95345. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From Scotland. Seeds presented by Dr. J. W. Gregor, Scottish Society for Research in Plant Breeding, Craigs House, Corstorphine, Midlothian. Received November 9, 1931.

A collection of timothy representing forms occurring in Great Britain and northern continental Europe. Each packet contained seeds from a single plant. Introduced for the use of department specialists.

95346. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Puerto Rico. Plants presented by G. N. Walcott, Puerto Rico Department of Agriculture. Received November 11, 1931.

Cabezona.

95347. CINNAMOMUM ZEYLANICUM Garc. Lauraceae. **Cinnamon.**

From the island of Trinidad. Seeds presented by R. C. Button, manager of nursery, Royal Botanic Garden. Received November 13, 1931.

A small evergreen tree 20 to 30 feet high, with very stiff ovate leaves 4 to 7 inches long. The small yellow-white flowers are borne in loose silky clusters. It is native to southeastern Asia.

95348. BRASSICA OLERACEA BOTRYTIS L. Brassicaceae. **Cauliflower.**

From Australia. Seeds presented by Herbert J. Rumsey & Sons (Ltd.), Dundas, New South Wales. Received November 13, 1931.

A blue-leaved sport originating from seeds sent to Mr. Rumsey from the Arlington Experiment Farm, Rosslyn, Va., by Professor Tracy.

95349. CYNODON TRANSVAALENSIS Burtt Davy. Poaceae. **Grass.**

From the Union of South Africa. Roots presented by E. Percy Phillips, principal botanist, division of plant industry, Department of Agriculture, Pretoria. Received December 30, 1930. Numbered in November, 1931.

A densely cespitose perennial grass with slender culms and green acute leaves an inch or more in length. It spreads rapidly, is compact, and is excellent for lawns and bowling greens, for which purpose it is now the principal grass in the Transvaal. It is known under the names Florida kweek or Florida grass (after the town of Florida, near Johannesburg), Germiston grass, etc.

95350 and 95351. ATALANTIA MISSIONIS (Wight) Oliver. Rutaceae.

From Ceylon. Seeds presented by the deputy conservator of forests, Jaffna. Received November 19, 1931.

A small tree, much resembling an orange tree in habit, with pale-gray bark and branches armed with short, stiff spines, rather large stiff leaves with indistinct veining, and very sweet white flowers. The fruit is like a small dark orange. The pale yellow-white wood is close grained, smooth, and suitable for cabinetwork.

For previous introduction see 85028.

95350. Collected in the Residency Park.

95351. Collected in the forest.

95352 to 95363. ALLIUM spp. Liliaceae. **Onion.**

From the Netherlands. Bulbs purchased from C. G. Van Tubergen (Ltd.), Zwanenburg Nurseries, Haarlem. Received November 20, 1931.

95352. ALLIUM ALBOPILOSUM C. H. Wright.

A trans-Caspian species which has probably the largest flower heads of the genus. The bulbs are large, and the strap-shaped leaves, 18 inches long, have longitudinal lines of white hairs beneath the edges. The scape is nearly 2 feet high and bears large heads 9 inches across, each composed of from 60 to 80 deep-lilac flowers.

For previous introduction see 69899.

95352 to 95363—Continued.

95353. ALLIUM ATROPURPUREUM Waldst. and Kit.

An upright, rather tall onion, sometimes over 3 feet high, with two to four narrow, linear leaves much shorter than the stem. The small dark-purple flowers, sometimes rose-purple with a darker middle stripe, are in dense hemispherical or spherical clusters. Native to meadows in southeastern Europe.

For previous introduction see 82384.

95354. ALLIUM CAERULEUM Pall.

A blue-flowered onion with slender grassy leaves and 14-inch stalks bearing close heads of small deep-blue flowers.

For previous introduction see 82385.

95355. ALLIUM DIOSCORIDIS Sibth. and Smith.

A tall, white-flowered onion up to 3 feet high, with long broadly linear keeled leaves as long as the scape. The nodding umbel consists of 20 to 30 flowers. Native to southern France and Corsica.

95356. ALLIUM DOUGLASII Hook.

A perennial with an ovoid bulb about 1 inch thick, native to the northwestern part of the United States. The sword-shaped leaves are 4 to 6 inches long, and the scape, 18 inches high, bears an umbel of rose-colored flowers.

95357. ALLIUM MULTIBULBOSUM Jacq.

An onion from central Europe, closely related to *Allium nigrum*, but differing in the numerous spherical bulblets, its broader and shorter leaves, and in certain floral characters. The flowers, entirely white or with a reddish central stripe in the petals, are in a dense globular cluster. Native to the meadows of central Europe.

For previous introduction see 82015.

95358. ALLIUM PENDULINUM. Tenore.

An alpine, native to Italy, with linear keeled leaves and long-peduncled nodding whitish flowers.

For previous introduction see 82391.

95359. ALLIUM ROSENBACHIANUM Regel.

A bulbous perennial, native to Turkistan, with oblong lanceolate leaves 8 inches high and a large globular umbel of purple flowers on a scape 2 feet high.

Variety *album*. A white-flowered form.

For previous introduction see 82392.

95360. ALLIUM ROSEUM L.

A plant about 1 foot high, with strap-shaped leaves rolled inward at the top and pale-rose flowers produced in umbels. Native to southern Europe.

Variety *grandiflorum*. A horticultural strain with flower heads about twice as large as the type, and large flowers.

95361. ALLIUM SPHAEROCEPHALON L.

The upright stem of this European onion is 1 to 2 feet high and is leafy only a third of its length. The half terete leaves are much shorter than the stem. The bright or dark-purple flowers are freely borne in globose or ovoid umbels about an inch in diameter.

95352 to 95363—Continued.

95362. ALLIUM sp.

No. 72. Persia. A form with broad leaves.

95363. ALLIUM sp.

A form with a huge scillalike shoot.

95364. ORYZA LATIFOLIA Desv. Poaceae.

From Cuba. Seeds presented by Dr. D. L. Van Dyne, Director, Tropical Plant Research Foundation, Central Baragua. Received November 28, 1931.

A perennial wild rice distributed through parts of tropical Asia, Africa, and America. The tufted stems become 6 to 8 feet high, and the plant is said to flower and produce seeds throughout the year. The smooth leaves are 1 to 2 feet long and about an inch wide, and the erect spike is up to 4 inches long. Introduced for the use of department specialists working with rice breeding.

For previous introduction see 67998.

95365. PRUNUS YEDOENSIS Mats. Amygdalaceae. **Yoshino cherry.**

From Chevy Chase, D. C. Scions collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. Received November 23, 1931.

A handsome Japanese tree, ultimately about 40 feet high, with smooth pale-gray bark, thick wide-spreading branches, and large sharply toothed leaves which normally appear after the flowers have passed their prime. The flowers, borne in profusion in the spring, are single, pale pink, fading to white, and about an inch across. The small black fruits are sometimes produced abundantly and afford an easy means of propagation.

For previous introduction see 69108.

95366. DEGUELIA ELLIPTICA (Roxb.) Taub. (*Derris elliptica* Roxb.). Fabaceae.

From the Canal Zone. Plants presented by J. E. Higgins, director, Canal Zone Experiment Gardens, Summit. Received November 23, 1931.

A large handsome climbing vine, native to southeastern Asia. The compound leaves, 1 foot long, are made up of 9 to 13 thin leathery obovate leaflets 4 to 6 inches long, and the bright-red pea-shaped flowers, 1 inch long, are borne in lax racemes a foot in length.

95367. NEPHELIUM LAPPACEUM L. Sapindaceae. **Rambutan.**

From Central America. Seeds presented by Wilson Popenoe, Research Department, United Fruit Co., Tela, Honduras. Received November 24, 1931.

An erect stately tropical tree 35 to 40 feet high, native to the Malay Archipelago and not yet extensively cultivated elsewhere. The compound leaves are composed of five to seven pairs of elliptic obovate or oblong glabrate leaflets about 4 inches long, shining and dark green above, paler beneath. The small flowers are in loose axillary and terminal panicles. The fruits which are produced in clusters of 10 or 12, are oval, about 2 inches in length, and covered with soft fleshy spines

95367—Continued.

less than an inch long. They are crimson, sometimes greenish, yellowish, or orange yellow. The outer covering, from which the spines arise, is thin and leathery and is easily torn off, exposing the white translucent juicy flesh (aril) which adheres to the oblong pointed and flattened seed. The flavor is acidulous, somewhat suggesting that of the grape.

For previous introduction see 56780.

95368. MENZIESIA FERRUGINEA J. E. Smith. Ericaceae.

From Canada. Seeds presented by Mrs. Susan Stoker, Duncan, Vancouver Island, British Columbia. Received November 25, 1931.

An erect shrub, 6 to 9 feet high, native to Canada and Alaska. The broadly oblanceolate leaves are 2 inches long, and the pink bell-shaped flowers are borne in terminal clusters.

95369 to 95371. FICUS spp. Moraceae.

From the Philippine Islands. Seeds presented by Arthur F. Fischer, Director of Forestry, Department of Agriculture and Natural Resources. Received November 25, 1931.

95369. FICUS MINAHASSAE (Teysm. and De Vr.) Miquel.

Hagimit. A rather small tropical tree, native to the Netherland East Indies, with a soft spongy trunk, irregularly heart-shaped acute leaves, and numerous small fruits about a quarter of an inch long.

For previous introduction see 80419.

95370. FICUS NOTA (Blanco) Merr.

Tibig, one of the best of the wild figs. The tree is upright and of medium size. The fruits, produced in short racemes on the trunk from the ground up to the stout branches, are nearly 2 inches in diameter, fleshy and juicy, and very sweet for a wild fruit, with the characteristic flavor of the cultivated fig. The tree does best in a fairly moist climate with the rainfall equally distributed throughout the year. It is probably very tender.

For previous introduction see 61010.

95371. FICUS ODORATA (Blanco) Merr.

Pakiling. A tree, native to the Philippine Islands, 15 to 18 feet high. It is marked by its very rough, fragrant leaves which are sublanceolate with a 1-sided rounded margin at the base.

For previous introduction see 80421.

95372 and 95373.

From France. Seeds presented by A. Gerard, La Fosse, Loir-et-Cher. Received November 27, 1931.

95372. DAVIDIA INVOLUCRATA VILMORINIANA (Dode) Hemsl. Cornaceae. **Dovetree.**

A pyramidal Chinese tree with cordate serrate yellow-green leaves and small flower heads each with two unequal creamy white bracts, the longer one pendulous and 6 inches long. The pear-shaped fruits, 1 to 2 inches long, are green with a purple bloom.

For previous introduction see 76573.

95372 and 95373—Continued.

95373. PINUS ARMANDI Franch. Pinaceae. **Armand pine.**

A tall pine, 60 to 100 feet high, with trunks often 6 feet in diameter, found growing between 9,000 and 10,000 feet altitude in moist regions. It is native to Yunnan, China.

For previous introduction see 84027.

95374. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

From Mexico. Seeds presented by F. Pothast, Rancho "La Union," Guerrero, Chihuahua. Received November 27, 1931.

A locally grown variety.

95375. PINUS MERKUSII Jungh. and De Vr. Pinaceae. **Pine.**

From Java. Seeds presented by the director, Department of Agriculture, Buitenzorg, through the American consul-general at Batavia. Received November 27, 1931.

A giant pine native in a vast area of poor volcanic soil in northern Sumatra. It sometimes grows to a height of 240 feet, with a diameter of 4 feet, and yields superior grades of turpentine and resin.

For previous introduction see 80103.

95376. CASUARINA LUEHMANNI R. T. Baker. Casuarinaceae.

From Australia. Seeds presented by Dr. Alexander McTaggart, senior plant introduction officer, Commonwealth Forestry Bureau, Canberra. Received November 28, 1931.

Bull oak. From near Gilgandra, New South Wales. A tree 80 to 100 feet high, native to Australia, with light-colored branchlets and flattened cones half an inch in diameter. The wood is hard and close-grained.

For previous introduction see 92484.

95377. IPOMOEA BATATAS (L.) Poir. Convolvulaceae. **Sweetpotato.**

From the Union of Soviet Socialist Republics. Cuttings presented by V. P. Alekseev, plant introducer, All-Union Institute of Plant Industry, Sukhum Subtropical Branch, Sukhum, Caucasus. Received October 1, 1931. Numbered in November, 1932.

Selected seedling varieties which originated at the Sukhum Subtropical Branch Station.

95378. GLYCINE JAVANICA L. Fabaceae.

From Africa. Seeds presented by the Tanganyika Territory Department of Agriculture, Northeastern Circle, Moshi. Received December 1, 1931.

A wide-climbing perennial vine, native to Asia and Africa, where it is used as a cover crop. The slender stems are silky pubescent, the trifoliolate leaves have ovate leaflets 2 to 4 inches long, finely pubescent beneath, and the small bright-red flowers are in axillary racemes 3 to 6 inches long.

95379. LIBOCEDRUS CHILENSIS (Don) Engl. Pinaceae.

Chilean incense-cedar.

From Isle Victoria, Argentina, South America. Seeds presented by Thornton T. Munger, director, Pacific Northwest Forest Experiment Station, Portland, Oreg. Received December 1, 1931.

An evergreen tree 60 feet high, native to Chile, with a compact pyramidal head. The flattened branchlets bear small erect-spreading glaucous green leaves with a silvery line beneath, and the ovate-oblong cones are half an inch long.

95380 to 95396.

From China. Seeds collected by the Forrest Expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received December 1, 1931.

95380. CRATAEGUS sp. Malaceae. **Hawthorn.**

No. 29959.

95381. CORYLOPSIS sp. Hamamelidaceae.

No. 29915. Corylopsis is a genus of shrubs related to the witch-hazel, with nodding spikes of fragrant yellow flowers appearing before the leaves which resemble those of hazel.

95382. (Undetermined.)

No. 29930. Received as *Hamamelis* sp., but the seeds do not appear to belong to that genus.

95383. LITSEA sp. Lauraceae.

No. 29730. Litsea is a genus of shrubs or small trees with alternate leathery leaves, small white or yellow flowers in umbellike clusters, and small, usually black fruits.

95384. NOMOCHARIS LOPHOPHORA (Bur. and Franch.) Balf. f. Liliaceae.

A bulbous plant from Szechwan, China, with ovate to lanceolate leaves about 3 inches long and yellow, somewhat lilylike flowers, often red punctate, borne singly on a scape 6 to 12 inches high.

95385 to 95390. PRIMULA spp. Primulaceae. **Primrose.**

95385. PRIMULA BURMANICA Balf. and Ward.

No. 29919. A stout, moisture-loving primrose from western China, with oblanceolate leaves up to a foot long and red-purple flowers borne on a scape 2 feet high. It is a member of the section Candelabra.

For previous introduction see 79098.

95386. PRIMULA BOREIO-CALLIANTHA Balf. and Forrest.

No. 29925. A primrose of the section Nivalis, with white-mealy lanceolate leaves and flowers in small umbels borne on a stout scape half again as long as the leaves. Native to southwestern China.

95387. PRIMULA PLANIFLORA Hort.

A name for which a place of publication and a description have not been found. Said to be related to *P. poissoni*.

95388. PRIMULA ROCKII W. W. Smith.

A small, woody primula, related to the section Bullatae, to which *P. forrestii* belongs, but very distinct. The large, deep-orange flowers are single on short peduncles and droop; the leaves are smaller and darker green; found at 10,000 feet altitude.

For previous introduction see 84029.

95389. PRIMULA SINOMOLLIS Balf. and Forr.

No. 29917. A Chinese primrose from the section Mollis, with a fleshy rhizome and cordate-elliptic leathery leaves up to 6 inches long. The flowers, reddish purple with pale purple lines down the centers of the petals, are in clusters of four to six on a scape often a foot high.

95390. PRIMULA SONCHIFOLIA Franch.

A primrose with obovate-oblong doubly sinuate papery leaves 6 to 8 inches long, native to southwestern China. The simple umbel of short-campanulate violet flowers is borne on a pilose scape as tall as the leaves.

95391. PRUNUS sp. Amygdalaceae. **Cherry.**

No. 30001.

95392. PRUNUS sp. Amygdalaceae. **Cherry.**

Mei-Hsi, 167.

95393. QUERCUS sp. Fagaceae. **Oak.**

No. 29967.

95394. ROSA sp. Rosaceae. **Rose.**

No. 29485.

95395. THEA FORRESTII Diels. Theaceae.

A shrub 3 to 8 feet high with slender branches, ovate or lanceolate papery leaves about an inch long, and small creamy white flowers. Native to wooded gullies in Yunnan, China.

95396. THEA PITARDII (C. Stuart) Rehder (*T. speciosa* Pitard). Theaceae.

A shrub 3 to 6 feet high, native to Yunnan, with coriaceous ovate to oblanceolate serrate leaves 2 to 4 inches long and rose-pink flowers 1 to 2 inches across.

For previous introduction see 93993.

95397. SOLANUM AVICULARE Forst. f. Solanaceae.

From Egypt. Seeds presented by Alfred Bircher, Middle Egypt Botanic Station, El Saff. Received December 1, 1931.

A branching Australian shrub with lanciniate leaves 10 inches long, cymes of 3 to 10 large dark-purple flowers, and drooping yellowish fruits an inch in diameter which are used for making marmalade.

For previous introduction see 77207.

95398 and 95399. HORDEUM VULGARE COELESTE L. Poaceae.

Six-rowed barley.

From Japan. Seeds presented by S. Kashiwada, Plant Breeding Laboratory, Kyusku Imperial University, Fukuoka. Received November 28, 1931.

Two varieties of glutinous barley, introduced for the use of department specialists.

95398. *Murasaki-mochi.*

95399. *Shiro-mochi.*

95400 to 95414.

From Sitkalidak Island, Alaska. Seeds purchased from Walter J. Eyerdam, Seattle, Wash. Received December 5, 1931.

95400. ACONITUM sp. Ranunculaceae.

95401. ARNICA sp. Asteraceae.

No. 1. *Mountain dandelion.*

95402. CAMPANULA ROTUNDIFOLIA ALASKANA A. Gray. Campanulaceae. **Harebell.**

A dwarf form of the well-known harebell, with the radical leaves cordate and the stem leaves ovate at the base and becoming lanceolate toward the top of the plant. The delicate blue flowers are about an inch long.

95403. GERANIUM ERIANTHUM DC. Geraniaceae. **Cranesbill.**

No. 11. A herbaceous perennial with five to seven palmately lobed leaves and rose-purple flowers 1 to 2 inches across. Native to Kamchatka and northwestern North America.

For previous introduction see 75675.

95404. LUPINUS sp. Fabaceae. **Lupine.**

No. 6.

95405. PETASITES sp. Asteraceae.

Mountain coltsfoot.

95406. POLEMONIUM sp. Polemoniaceae.

No. 14.

95407. RANUNCULUS sp. Ranunculaceae.

No. 2.

95408. SCROPHULARIA sp. Scrophulariaceae.

No. 15.

95409. SENECIO sp. Asteraceae.

A yellow composite found growing near the seacoast in salty sand.

95410. VIOLA sp. Violaceae. **Violet.**

95411. (Undetermined.)

A small plant with blue flowers, found growing in sand.

95412 to 95414 were collected on Evans Island, Prince William Sound.

95412. (Undetermined.)

95413. (Undetermined.)

95414. (Undetermined.)

95415. PISTACIA ATLANTICA Desf. Anacardiaceae. **Mount Atlas pistache.**

From Tunisia. Seeds presented by Robert W. Hodgson, University of California. Received December 8, 1931.

A tree, native to northern Africa, up to 50 feet high, with many woody branches which form a dense head. The blue, somewhat fleshy drupes are about the size of peas. A resinous gum flows from the bark of the trunk and branches at various times of the year, especially in summer, and hardens to a pale-yellow color. This gum has a pleasant aromatic odor and taste, and thickens in plates covering the branches. The Arabs collect this substance in autumn and winter and chew it to whiten the teeth and sweeten the breath.

For previous introduction see 48163.

95416. STAUNTONIA HEXAPHYLLA Decaisne. Lardizabalaceae.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. Received December 11, 1931.

A climbing evergreen shrub, native to Japan, with palmately compound leaves made up of three to seven ovate leaflets, 2 inches long. The fragrant white flowers are borne in corymbose racemes and are followed by ellipsoid fruits about 4 inches long, splashed with scarlet.

95417 to 95443.

From Sitkalidak Island, Alaska. Plant material purchased from Walter J. Eyerdam, Seattle, Wash. Received December 8, 1931.

95417. ANDROSACE sp. Primulaceae.

Plants.

95418. ANEMONE sp. Ranunculaceae.

Plants.

95419. CAMPANULA ROTUNDIFOLIA ALASKANA A. Gray. Campanulaceae. **Harebell.**

Plants.

For previous introduction and description see 95402.

95420. DRABA BOREALIS DC. Brassicaceae.

Seeds of a stellate-pubescent herbaceous perennial 2 to 12 inches high, native to the Arctic regions. The ovate leaves are less than half an inch long, and the small flowers are white.

95421. LOISELEURIA PROCUMBENS (L.) Desv. Ericaceae. **Alpine-azalea.**

Plants and seeds of a low straggling evergreen shrub native to the Arctic regions. The small linear-oblong leaves a quarter of an inch long are dark green above, paler below, and have strongly revolute margins. The small bell-shaped pink and white flowers are in clusters of one to five at the ends of the branches.

95422. CLAYTONIA sp. Portulacaceae.

Plants.

95423. CASSIOPE STELLERIANA (Pall.) DC. Ericaceae.

Plants and seeds of a low evergreen shrub with small oblong scalelike leaves and solitary pinkish terminal flowers. Native to northwestern North America.

95424. FRITILLARIA CAMSCHATCENSIS (L.) Ker. Liliaceae.

Bulbs of a lilylike perennial with 1-flowered to 3-flowered stems 6 to 18 inches high. The 10 to 15 leaves are lanceolate, the lower ones in whorls, and the chocolate-purple flowers are about an inch long. Native to Siberia and Alaska.

95425. GENTIANA sp. Gentianaceae. **Gentian.**

Plants.

95426. HEUCHERA GLABRA Willd. Saxifragaceae.

Plants of a perennial herb with smooth cordate-orbicular 5-lobed to 7-lobed basal leaves and erect or curved stems 1 to 2 feet high bearing panicles of small white flowers. It is native to northwestern North America.

95417 to 95443—Continued.

95427. PNEUMARIA MARITIMA (L.) Hill (*Mertensia maritima* S. F. Gray). Boraginaceae.

Plants of a fleshy herbaceous perennial, with spreading branches 3 to 15 inches long, thick ovate to oblong, very glaucous leaves 1 to 4 inches long, and blue or nearly white bell-shaped flowers one-quarter inch long. It is native to the sandy beaches of the North Temperate Zone.

95428. POLEMONIUM sp. Polemoniaceae.

Plants.

95429. POLYPODIUM sp. Polypodiaceae. **Polypody.**

Plants.

95430. POTENTILLA VILLOSA Pall. Rosaceae.

Plants of a herbaceous perennial 4 to 12 inches high, which is densely silky villous. The long-petioled trifoliolate basal leaves, 9 to 15 inches long, crenate-serrate on the margin and white tomentose beneath, form beautiful rosettes. The showy golden-yellow flowers, an inch across, are borne in few-flowered clusters which are densely silky villous.

95431. SIBBALDIA PROCUMBENS L. Rosaceae.

Plants of a densely tufted procumbent or creeping herbaceous perennial, native to the Arctic regions. The trifoliolate leaves 2 to 4 inches long have oblanceolate leaflets, three to five toothed at the apex, and the small yellow flowers are borne on axillary peduncles as long as the leaves.

95432. ROMANZOFFIA SITCHENSIS Bong. Hydrophyllaceae.

Plants of a low perennial herb, native to Alaska, with cordate-reniform crenately 7 to 11 lobed radical leaves and white flowers in racemes on stems 2 to 6 inches high.

95433. RHODODENDRON CAMTSCHATICUM Pall. Ericaceae.

Seeds of a low-growing, more or less deciduous undershrub, usually about 6 inches high, native to Alaska. The spatulate-obovate leaves are 1 to 2 inches long, and the wheel-shaped rose-purple flowers, 1 inch across, are borne singly or in pairs at the ends of the branches.

95434. SALIX sp. Salicaceae. **Willow.**

Plants.

95435. SALIX SCOULERIANA Barratt. Salicaceae. **Willow.**

Plants of a large bush or tree up to 30 feet high, native to northwestern North America. The elliptic to obovate leaves have crenate-serrate margins and are white or rusty tomentose and reticulate beneath.

95436. TOFIELDIA COCCINEA Richards. Melanthiaceae.

Plants of a bulbous perennial with radical linear-lanceolate leaves and small reddish flowers in a compact terminal cluster. Native to the Arctic region of northwestern North America.

95437. VACCINIUM VITIS-IDAEA L. Vacciniaceae. **Cowberry.**

Plants of a small bush, seldom more than 7 or 8 inches high, which grows wild in the northern regions of Europe, Asia, and North America. The leaves are evergreen, and the blossoms are white or pink. The deep-red berries have a tart sour taste and are a reasonable substitute for cranberries.

For previous introduction see 66134.

95438. VIOLA sp. Violaceae. **Violet.**

Plants and seeds.

95439. (Undetermined.)

Plants.

95440. (Undetermined.)

Plants.

95441. CRYPTOGRAMMA ACROSTICHOIDES R. Br. Polypodiaceae. **American rockbrake.**

Plants of a small alpine fern, native to northern North America. The stalks are 2 to 6 inches high, and the sterile leaves are greenish, two to three pinnate, the segments being oblong to ovate and incised on the margin. The fertile leaves are similar but are straw color, and the segments are linear.

95442. (Undetermined.)

Plants.

95443. LUETKEA PECTINATA (Pursh) Kuntze. Rosaceae.

Plants of a low matted creeping shrub with stoloniferous branches, native to northwestern North America. The small alternate leaves are three lobed with each lobe three cleft, and the erect flowering branches, 2 to 6 inches high, bear upright racemes of small white flowers.

95444. AMYGDALUS NANA L. Amygdalaceae. **Russian almond.**

From Brooks, Alberta, Canada. Seeds collected by Knowles A. Ryerson, Bureau of Plant Industry. Received October 25, 1928. Numbered in December, 1931.

An almond introduced for trial in the Great Plains region. A bush about 5 feet high, native to Russia and western Asia, with thick stiff sharply toothed leaves and solitary pinkish flowers. The small hard hairy fruit contains a large pit of bitter flavor. This almond is probably hardy throughout the northern United States.

For previous introduction see 67906.

95445 to 95450.

From China. Seeds collected by the Forrest Expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received December 14, 1931.

95445. BENZOIN sp. Lauraceae.

No. 29906.

95446. MECONOPSIS INTEGRIFOLIA (Maxim.) Franch. Papaveraceae. **Yellow Chinese-poppy.**

Men's Field No. 381.

95447. PODOPHYLLUM sp. Berberidaceae. **Mayapple.**

No. 30037.

95448. STYRAX sp. Styracaceae. **Snowbell.**

No. 29552.

95449. THEA sp. Theaceae.

95445 to 95450—Continued.

95450. BENZOIN sp. Lauraceae.

No. 29980. Chinese name *Shiang Chang Shu.*

95451 to 95453.

From Seattle, Wash. Scions from Volunteer Park, presented by J. Umlauff, head gardener. Received December 14, 1931.

95451 and 95452. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

95451. No. 8. A wide-spreading tree about 15 feet high, with a rather flat crown and large double-white flowers tinged with pink below and at the margins. The pale straw-yellow young foliage and leafy carpels place this variety very close to *Shogetsu,* with which it may prove identical.

95452. No. 18. A slender tree about 10 feet high, with dark gray-brown bark and green or slightly brownish young foliage. From the deep-pink globose-truncate buds protrude two leafy carpels. The double flowers, with about 40 petals, are clear pink, 1¾ inches across, with a number of tufted petaloids partly obscuring the center of the flower. The flowers are in clusters of four to seven, with the clusters often in more or less globular masses. This variety is not yet identified and may be a new form.

95453. PRUNUS SUBHIRTELLA Miquel. Amygdalaceae. **Higan cherry.**

A pendulous variety with double flowers up to three-fourths inch across, pale pink in the center, deeper pink toward the margins and below; in clusters of five to seven. The tree is reported not to be autumn blooming.

95454 to 95499.

From England. Seeds purchased from W. E. Th Ingwersen (Ltd.), Birch Farm Hardy Plant Nursery, Sharpthorne, East Grimstead, Sussex. Received December 14, 1931.

95454 to 95458. ALLIUM spp. Liliaceae. **Onion.**

95454. ALLIUM CYANEUM Regel.

A rather dwarf plant, less than a foot high, with small heads of pendulous pale blue flowers. Native to northern China.

Variety *macrostemon.*

For previous introduction see 91274.

95455. ALLIUM NARCISSIFLORUM Vill.

An onion, native to Italy, about 9 inches high, with large rose-colored flowers in nodding heads.

For previous introduction see 82389.

95456. ALLIUM NEVII S. Wats.

A bulbous perennial, native to northwestern America, with a globose white or reddish bulb having transverse reticulations. The narrowly linear leaves are 6 to 10 inches long, and the light-rose flowers are borne on a scape somewhat longer than the leaves.

95457. ALLIUM SCHUBERTII Zucc.

A large bulbous plant, native to Asia Minor and Persia, with broadly strap-shaped leaves and rose-colored flowers in huge subglobose heads which are at times a foot in diameter.

For previous introduction see 82393.

95458. ALLIUM sp.

Originally from Portugal.

95459 to 95466. ANTHEMIS spp. Asteraceae. **Camomile.**

95459. ANTHEMIS CARPATICA Willd. (*A. styriaca* Vest).

An alpine perennial from central Europe which forms a tuft of short leafy stems bearing solitary daisylike flowers with white rays and yellow disks.

95460. ANTHEMIS CUPANIANA Hort.

A name for which a place of publication and a description have not been found.

95461. ANTHEMIS HAUSSKNECHTII Boiss. and Reut.

An annual daisylike plant with erect hairy stems 6 inches or more high, ovate-oblong tripinnatisect leaves, and flowers with white rays and violet centers. Native to Asia Minor.

95462. ANTHEMIS KITAIBELII Spreng.

A perennial alpine with short hairy stems and narrow laciniate bipinnate leaves. The flower heads, with white rays and yellow disks, are smaller than those of *A. carpatica.* Native to the mountains of southeastern Europe.

95463. ANTHEMIS RIGESCENS Willd.

An alpine perennial camomile from Asia Minor with simple or branched stems and broadly ovate-oblong lanciniate-pinnatisect leaves. The flower heads with white rays are borne on long peduncles.

95464. ANTHEMIS SANCTI-JOHANNIS Stoy., Steff., and Turrill.

An ornamental herbaceous perennial, 3 to 4 feet high, native to the mountain slopes of Bulgaria at an altitude of 4,000 feet. The woolly stems, with few branches, have two to three times partly pinnate basal leaves, 5 to 7 inches long, the tips of which are armed with hard white acuminate points. The stem leaves are similar but gradually smaller, leaving bare stems 3 to 7 inches below the flower heads, which are solitary, 1 to 2 inches broad, and the ray flowers and disk are an intense orange, making a brilliant showing in contrast to the woolly leaves.

For previous introduction see 77319.

95465. ANTHEMIS CARPATICA Willd. (*A. styriaca* Vest).

For previous introduction and description see 95459.

95466. ANTHEMIS sp.

Seeds collected in the Balkans.

95467 to 95473. ARMERIA spp. Plumbaginaceae. **Thrift.**

95467. ARMERIA ALLIOIDES Boiss.

An ornamental herbaceous perennial, native to the mountains of central Europe, with linear leaves up to 4 inches long and white flower heads.

95454 to 95499—Continued.

95468. ARMERIA CALABRICA Hort.

A name for which a place of publication and a description have not been found.

95469. ARMERIA CANTABRICA Boiss. and Reut.

A woody cespitose plant with a thick rhizome and lanceolate or linear, rather fleshy leaves 1 to 3 inches long. The rosy flowers are in small heads on a scape 3 to 15 inches high. Native to Spain.

95470. ARMERIA CARIENSIS RUMELICA Boiss.

A cespitose herbaceous perennial with a rosette of narrow leaves and a compact head of rosy flowers on a slender scape. Native to Macedonia and Greece.

95471. ARMERIA CORSICA Hort.

A name for which a place of publication and a description have not been found.

95472. STATICE CHILENSIS MAGELLANICA (Bois.) Macloskie.

A cespitose perennial herb from the Straits of Magellan with linear rigid sharp-pointed puberulous leaves and numerous purplish flower heads.

95473. ARMERIA PUBENS HIRSUTA Hort.

A name for which a place of publication and a description have not been found.

95474. STATICE PUNGENS Brot. Plumbaginaceae. Thrift.

A woody plant about 6 inches high with rigid lanceolate, somewhat glaucous leaves 2 to 3 inches long, and rosy flowers in small heads on simple scapes. Native to Spain.

95475. STATICE sp. Plumbaginaceae. Thrift.

A mixed sample collected on Mount Dormitor.

95476. STATICE sp. Plumbaginaceae. Thrift.

A mixed sample collected in the Balkans.

95477. BULBINELLA HOOKERI (Colenso) Cheeseman. Liliaceae.

A New Zealand herbaceous perennial, related to the asphodels, varying in size from 2 to 3 feet. The numerous glaucous-green leaves are linear, and the loose racemes of bright-yellow flowers are on slender scapes up to 10 inches long.

For previous introduction see 91389.

95478 to 95482. CHRYSANTHEMUM spp. Asteraceae.

95478. CHRYSANTHEMUM CORYMBOSUM L.

A robust perennial 1 to 4 feet high, with leaves 6 inches long and 3 inches wide in the middle, tapering both ways and deeply cut into segments which alternate along the midrib. The white flowers are borne in dense flat-topped clusters. Native to the Caucasus in Europe and to North Africa.

For previous introduction see 40544.

95454 to 95499—Continued.

95479. CHRYSANTHEMUM PULVERULENTUM Lag. (*Pyrethrum hispanicum* Willk.). Asteraceae.

A herbaceous perennial with a woody base, deeply pinnatifid lower leaves, and linear stem leaves. The plant is very variable in size and habit; the flowers also vary in color from white to yellow, or even purplish yellow. Native to central Spain.

95480. CHRYSANTHEMUM MAWII Hook. f.

A short woody perennial, native to Morocco, with stems 1 to 2 feet high. The small triangular-oblong pinnatifid leaves are woolly gray, and the long-stalked flower heads, 1 to 2 inches across, have red-purple disks and 3-toothed white rays which are reddish on the back.

95481. CHRYSANTHEMUM MYCONIS L.

A somewhat weedy plant resembling the ordinary field daisy except that the yellow flowers are smaller. They are freely borne on branching stems for over two months.

For previous introduction see 40641.

95482. CHRYSANTHEMUM ZAWADSKII Herbich.

A tufted herbaceous perennial, native to Galicia, said to have rose-tinted flowers appearing throughout the summer.

95483 to 95485. ERICA spp. Ericaceae. Heath.

95483. ERICA ARBOREA ALPINA Dieck.

An evergreen, bushy heath, somewhat hardier to cold than the type, native to the mountainous regions of Cueca, Spain. The fragrant dull-white flowers are borne in stiff pyramidal clusters, but the chief beauty of the plant lies in the rich, cheerful, green color of the foliage, which does not change during the winter.

For previous introduction see 80328.

95484. ERICA CINEREA L. Twisted heath.

A much-branched and twisted shrub 1 to 2 feet high, with narrow leaves in threes and showy clusters of rose-violet flowers. It is native to Europe.

Variety *atrosanguinea*.

For previous introduction see 79156.

95485. ERICA UMBELLATA L.

A shrub 5 to 10 feet high with small ternate obtuse 3-angled leaves one-third inch long and small rosy flowers in small umbels at the ends of the branches. Native to Spain.

95486. ERODIUM GRUNERI Hort. Geraniaceae. Heronbill.

A name for which a place of publication and a description have not been found.

95487. ERODIUM LANDAUERI Hort. Geraniaceae. Heronbill.

A name for which a place of publication and a description have not been found.

95488. HEDYSARUM MULTIJUGUM Maxim. Fabaceae.

A straggling herbaceous perennial of angular growth, native to Mongolia.

95454 to 95499—Continued.

The stems are 2 to 5 feet high, the compound leaves are made up of 6 to 12 pairs of small oval gray-green leaflets, and the violet flowers with yellow blotches are borne in racemes 18 inches long and appear throughout the summer.

95489. HYACINTHUS AMETHYSTINUS L. Liliaceae. **Hyacinth.**

A slender, graceful Spanish hyacinth with short racemes of light-blue flowers up to 6 inches high.

For previous introduction see 91282.

95490 to 95492. LILIUM spp. Liliaceae. **Lily.**

95490. LILIUM HELDREICHII Freyn.

A lily, native to Greece, with stems 2 to 3 feet high, bearing narrow scattered leaves and one to four orange-red flowers, tinged with yellow outside, which appear early in July.

95491. LILIUM SUTCHUENENSE Franch.

A lily from Szechwan, western China, with a stem 3 to 5 feet high and spreading underground stems. The thickly scattered leaves are linear and deep green, and the pendulous flowers, up to 20 in number, have reflexed orange-red segments spotted with purplish black and red anthers.

For previous introduction see 65720.

95492. LILIUM sp.

95493. MUSCARI sp. Liliaceae. **Grape-hyacinth.**

Originally from Portugal.

95494. RANUNCULUS GRAMINEUS L. Ranunculaceae. **Buttercup.**

A smooth herbaceous perennial with rosettes of linear to lanceolate leaves and bright-yellow flowers on stalks 6 to 12 inches high. It is native to Europe.

For previous introduction see 91445.

95495. SCABIOSA GRAMINIFOLIA L. Dipsacaceae.

A low herbaceous perennial, somewhat woody at the base, native to southern Europe. The stems that rise about 1 foot above the basal rosette bear linear silvery leaves, and the typical scabious flowers are pale lavender.

95496. SCABIOSA LUCIDA Vill. Dipsacaceae.

A perennial herb with shining-green deeply divided leaves in basal rosettes and terminal heads of blue-purple flowers. Native to alpine meadows in Spain.

95497 to 95499. STATICE spp. Plumbaginaceae. **Thrift.**

95497. STATICE FASCICULATA Vent.

A glabrous perennial, subshrubby at the base, with yuccalike leaves and dense heads of pale-pink aremerialike flowers. It is native to southwestern Europe.

95498. STATICE JUNCEA (Girard) Hubbard.

A low herbaceous perennial with a rosette of linear leaves and small heads of pink aremerialike flowers. Native to Europe.

95454 to 95499—Continued.

95499. STATICE WELWITSCHII (Boiss.) Hubbard.

A bushy perennial with a rosette of rigid acuminate linear leaves and small flowers in a hemispherical head of aremerialike flowers. Native to the coast of southern Spain.

95500. CARPOTROCHE BRASILIENSIS (Raddi) Endl. Flacourtiaceae. **Sapucainha.**

From Brazil. Seeds presented by Prof. P. H. Rolfs, Viçosa, Minas Geraes. Received December 15, 1931.

A tropical tree 30 to 50 feet high, with oblong leaves about 4 inches long and few-flowered racemes of small white flowers. The fruits are about 4 inches in diameter. A sirup said to cure leprosy and an ointment used for skin affections are prepared from the seeds.

For previous introduction see 88314.

95501 and 95502.

From China. Seeds presented by Raymond T. Meyer, Oberlin Shansi Memorial Schools, Taiku, Shansi. Received December 15, 1931.

95501. AMYGDALUS PERSICA L. Amygdalaceae. **Peach.**

A locally grown hardy peach.

95502. TRITICUM AESTIVUM L. (*T. vulgare* Vill.). Poaceae. **Common wheat.**

An early-maturing spring wheat.

95503. LARIX LYALLII Parl. Pinaceae. **Alpine larch.**

From Washington. Seeds presented by Thornton Munger, director, Pacific Northwest Forest Experiment Station, Portland, Oreg. Received December 16, 1931.

Collected near Lake Caroline, Wenatchee National Forest, Leavenworth, Wash., a region which has 30 inches of rainfall during the year and a frost-free period of 30 days. A deciduous tree up to 75 feet high, with stout brown-tomentose branchlets and 4-angled leaves 1 to 2 inches long.

95504 to 95515.

From China. Seeds collected by the Forrest Expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received December 17, 1931.

95504. ACER sp. Aceraceae. **Maple.**

95505. BENZOIN sp. Lauraceae.

The young foliage is silvery.

95506. CORNUS sp. Cornaceae. **Dogwood.**

No. 30000.

95507. DECAISNEA FARGESII Franch. Lardizabalaceae.

A handsome shrub up to 15 feet high, with large pinnate leaves 3 feet long, greenish flowers in long pendulous racemes, and deep-blue fruits 3 to 4 inches long. Native to western China.

For previous introduction see 77828.

95508. GORDONIA sp. Theaceae.

A tree 40 to 60 feet high.

95504 to 95515—Continued.

95509. GORDONIA CHRYSANDRA Hort. Theaceae.

No. 15559. A name for which a place of publication and a description have not been found.

95510. PRUNUS sp. Amygdalaceae.

A wild apricot.

95511. PRUNUS sp. Amygdalaceae.

Men's No. 520. A wild plum with crimson or purple edible fruits.

95512. LAUROCERASUS sp. Amygdalaceae.

A tree 40 feet high with large black fruits.

95513. STYRAX LANGKONGENSIS W. W. Smith. Styracaceae. **Snowbell.**

Men's No. 570. An ornamental shrub 1 to 2 feet tall, which grows in arid regions at 7,500 feet altitude. The flowers are large white and drooping, with rich red-brown calyxes.

For previous introduction see 56018.

95514. THEA PITARDII (C. Stuart) Rehder (*T. speciosa* Pitard). Theaceae.

For previous introduction and description see 95396.

95515. THEA sp. Theaceae.

No. 29960. A form with white flowers.

95516. EUCALYPTUS ALGERIENSIS Trabut. Myrtaceae.

From Algeria. Seeds presented by Dr. H. Maire, University of Algiers. Received December 18, 1931.

A hybrid between *Eucalyptus rostrata* and *E. rudis* which has become naturalized in North Africa and now covers considerable areas on the hills in Algeria. It differs from *E. rudis* by its smooth trunk and its small flowers with the hemispherical operculum not beaked; and from *E. rostrata* by its buds, which are white like those of *E. rudis*. *E. rudis* flowers in the month of December, *E. algeriensis* flowers in the spring, while *E. rostrata* flowers in July and August.

For previous introduction see 64176.

95517. ORYZA LATIFOLIA Desv. Poaceae. **Rice.**

From Cuba. Seeds purchased from Juan T. Roig, Pinar del Rio. Received December 18, 1931.

For previous introduction and description see 95364.

95518 and 95519. TIGRIDIA PAVONIA (L. f.) Ker. Iridaceae. **Common tigerflower.**

From Ireland. Bulbs purchased from T. Smith, Daisy Hill Nursery, Newry. Received December 19, 1931.

A tender bulbous plant over 2 feet tall, with several sword-shaped strongly plicate long-pointed leaves and very large showy flowers, 5 to 6 inches across, produced in succession through the warm season.

95518. *Alba immaculata.* A spotless white variety, a sport from variety *alba.*

95519. *Canariensis.* A pale-yellow flowered form.

95520 to 95533. SIDALCEA spp. Malvaceae.

From the Netherlands. Plants purchased from B. Ruys (Ltd.), Royal Moerheim Nurseries, Dedemsvaart. Received December 21, 1931.

95520. SIDALCEA CANDIDA A. Gray. **White prairiemallow.**

An erect herbaceous perennial, 2 to 3 feet high, native to the Rocky Mountains. The radical leaves are broadly cordate with crenate margins and are 4 to 6 inches across, while the stem leaves are 5-parted to 7-parted, with the divisions narrow and notched. The white flowers, more than an inch across, are borne in a spikelike raceme.

95521 to 95532. SIDALCEA HYBRIDA Hort. **Prairiemallow.**

The sidalceas are hardy perennials with stipular palmately cleft leaves. The showy pink, white, or purple flowers are in terminal racemes or spikes.

95521. *Bertram Park.* A rich rose-pink novelty, one of the finest.

95522. *Crimson King.* One of the darkest in color; the brown-crimson flowers, though not large, are densely placed on the elegant spikes.

95523. *Interlaken.* A form with fine silvery pink flowers.

95524. *Monarch.* A late-flowering novelty whose large wide open semi-double flowers are rich self rosy crimson and borne on loosely arranged spikes.

95525. *Mr. Lindbergh.* An excellent novelty with dark rubin-red flowers, the best of this color class.

95526. *Page Roberts.* A form with soft pink flowers.

95527. *Rose Beauty.* Earlier, dwarfer, and deeper in color than *Rose Queen.*

95528. *Rose Queen.* Dark-pink flowers.

95529. *Rosy Gem.* Very free flowering spikes of soft pink flowers.

95530. *Ruby.* A new form with rich ruby-red flowers.

95531. *Scarlet Beauty.* A very fine free-flowering variety whose flowers vary from deep amaranth pink to red.

95532. *Sussex Beauty.* A very free-flowering seedling from *Rosy Gem,* with clear satiny pink flowers.

95533. SIDALCEA MALVAEFLORA (DC.) A. Gray. **Checkerbloom.**

A tall herbaceous perennial, native to California, with stems up to 6 feet high. The lower leaves are incised-crenate and the upper are five cleft with narrow, nearly entire segments. When fully expanded the purple flowers of the wild form are about 2 inches across.

Variety *rubra.* A form with rose-red flowers.

95534 and 95535.

From Washington. Bud wood presented by G. E. Kastengren, superintendent, Sanborn Map Co., Seattle. Received December 21, 1931.

95534 and 95535—Continued.

95534. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

A seedling apple growing on land that was logged off more than 30 years ago. The apples keep until the following April without special care.

95535. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

A large freestone apricot of beautiful color and fine fragrance and flavor.

95536. CENCHRUS BIFLORUS Roxb. Poaceae. **Grass.**

From Australia. Seeds presented by F. J. S. Wise, agricultural adviser, Broome, Western Australia. Received December 22, 1931.

A perennial grass native to southern Asia and Africa. The simple stems are 6 to 24 inches high, and the linear-lanceolate leaves are 3 to 10 inches long. It is considered one of the most nutritious grasses and excellent both for grazing and for hay. In Florida and along the Gulf Coast it succeeds well and tends to spread naturally, but the growth is sufficient only for grazing, as on sandy soil the grass grows only 6 to 12 inches high.

For previous introduction see 49514.

95537 to 95539. CITRUS spp. Rutaceae.

From the West Indies. Scions presented by Edmund H. Twight, specialist in fruits, Department of Agriculture and Commerce, Rio Piedras, Puerto Rico. Received December 23, 1931.

95537. CITRUS sp.

Rico No. 1, Mayaguez. A smooth deep-yellow slightly obovoid very juicy seedless orange with deep-yellow, very tender flesh of excellent quality.

95538. CITRUS sp.

Rico No. 2, San Sebastion. A smooth deep-yellow navel orange; the deep-yellow flesh is solid, tender, with a fine distinctive flavor.

95539. CITRUS sp.

Rico No. 6, Sabana Grande. A smooth deep-yellow orange with a tendency to flatness like a Marsh grapefruit, also a few seeds. The deep-yellow acid flesh is tender, of exceptionally fine flavor, and very juicy (3½ oranges produced over a pint of juice).

95540 to 95543.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. Received December 28, 1931.

95540. ACER CARPINIFOLIUM Sieb. and Zucc. Aceraceae. **Hornbeam maple.**

A tree up to 30 feet high with oblong sharp-pointed doubly serrate leaves 3 to 5 inches long, short racemes of greenish flowers, and glabrous fruits about an inch long. The bright-green hornbeamlike leaves turn bright brownish yellow in autumn. Native to Japan.

For previous introduction see 91957.

95541. ACER NIKOENSE (Miquel) Maxim. Aceraceae. **Maple.**

A tree up to 50 feet high, native to Japan and central China, with attractive foliage somewhat like the boxelder, which becomes brilliant red or purple in the autumn.

For previous introduction see 91242.

95540 to 95543—Continued.

95542. RHODODENDRON RETICULATUM D. Don (*Azalea rhombica* Hort.). Ericaceae.

A much-branched deciduous Japanese shrub up to 25 feet high belonging to the section Sciodorhodion. The branchlets are yellow brown, the reticulate broadly ovate leaves, 2 to 3 inches long, are in clusters of two or three, and the slightly 2-lipped rotate-campanulate flowers appearing before the leaves are rose purple to magenta. There are two forms—the ordinary form with 10 stamens, often called *R. rhombicum*, and a form with 5 stamens called *R. dilatatum*.

For previous introduction see 91246.

95543. IRIS ROSSII Baker. Iridaceae.

A beardless iris with a creeping rhizome, linear green grasslike leaves, 4 to 6 inches long, and a very short stem with a single lilac flower 1 inch across. It is native to Chosen and northern China.

For previous introduction see 91257.

95544. PHLEUM PRATENSE L. Poaceae. **Timothy.**

From Norway. Seeds presented by Haakon Foss, Statens forsoksstasion for fjellbyadene, Valdress. Received December 29, 1931.

Seeds collected from individual plants for a department specialist.

95545 to 95547.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. Received December 30, 1931.

95545. ACER BARBINERVE Maxim. Aceraceae. **Maple.**

A shrubby maple, native to Manchuria, with coarsely toothed 5-lobed leaves.

For previous introduction see 90651.

95546. ACER CISSIFOLIUM (Sieb. and Zucc.) Koch. Aceraceae. **Maple.**

A Japanese maple of compact, rounded habit, becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches long. The minute flowers are produced in May with the leaves, and the keys, about 1 inch long, occur in long racemes. In autumn the foliage turns red and yellow.

For previous introduction see 91240.

95547. DISANTHUS CERCIDIFOLIA Maxim. Hamamelidaceae.

A handsome shrub, native to Japan, with cercislike leaves which turn to crimson red suffused with orange in the autumn. The dark-purple flowers, resembling those of witch-hazel and about three-fourths inch across, appear in October.

95548. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From India. Seeds presented by D. C. Seth & Sons, Anderson & Templer Orchards and Nurseries, Sargodha, Arifwala, Punjab. Received December 28, 1931.

Hindwana melon.

95549. ANTIGONON MACROCARPUM Britt. and Small. Polygonaceae.

From Cuba. Seeds presented by Mrs. F. S. Earle, Herradura. Received December 28, 1931.

A herbaceous climber, often 15 feet or more long, with broadly ovate or roundish rather thick leaves deeply cordate at the base. The small light-pink flowers are in elongated racemes. Native to St. Thomas, British West Indies.

95550 and 95551.

From Morocco. Seeds presented by H. Brayard, Directeur de la Station Expérimentale, Marrakech. Received December 28, 1931.

95550. AMYGDALUS PERSICA L. Amygdalaceae. **Peach.**

A wild peach.

95551. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

A wild apricot.

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UNITED STATES DEPARTMENT OF AGRICULTURE

INVENTORY No. 110

Washington, D. C. ▼ Issued November 1933

PLANT MATERIAL INTRODUCED BY THE DIVISION OF FOREIGN PLANT INTRODUCTION, BUREAU OF PLANT INDUSTRY, JANUARY 1 TO MARCH 31, 1932 (Nos. 95552–98256)

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INTRODUCTORY STATEMENT

Inventory 110, recording plant material received by the Division of Foreign Plant Introduction between January 1 and March 31, 1932 (nos. 95552–98256), is conspicuous for two major groups—the one of soybeans containing 1,503 introductions, and the other the collections of the Allison V. Armour expedition to the West Indies and South America on which both David Fairchild and P. H. Dorsett collected for the Division a total of 371 numbers.

No two collections could be cited that would more perfectly illustrate the extremes of purposes that have to be pursued. The soybean collection is part of an intensive study of soybean types and varieties inaugurated by P. H. Dorsett and W. J. Morse during their explorations in 1929–30 when this crop was studied in the field. If the present introductions add as much to the advancement of this new crop as the former introductions have done, this collection, so dryly recorded here, will be of national importance. The other mass of material represents a study of the flora native and introduced of the islands and countries traversed, with the specific intent of establishing as many new plants as possible in the comparable areas about the Gulf of Mexico and in southern Florida. It embraces some duplicates, some one of which may be more suited than the rest for our conditions.

Conspicuous among the many subtropical plants, both economic and ornamental in character, are included seeds of many kinds of palms (over 40 numbers) some of them from plants native to the country of collection, others from exotic species established there. Plants raised from these seeds will be planted for testing in the South to determine their suitability for our soils and climates, and added to the present collection at Coconut Grove will make one of the most important collections in the country.

Through the courtesy of Maj. Lionel de Rothschild, London, England, the Division has shared in some of the seeds from the last Forrest expedition in China, which sent in, among other things, many rhododendrons; others who have contributed to the rhododendron studies of the Division are the Hon. Henry MacLaren and J. R. Stevenson, who have sent seeds of species and varieties for test as to hardiness.

Conspicuous additions of chestnut material from China are comprised in four sets of material (95631–95648, 95663, 95664, 97853–97857, 98001–98009) from Peter Liu and one from Japan (96390–96420) through R. Kent Beattie from

the experiment station at Ayabe, the experiment station at Okitsu, and several other points which represent named cultivated varieties and several other trees of supposed merit, the whole to be used in studies now being made by Department specialists.

Many introductions, about 60 in number, were made to add to the maple collection at the United States Plant Field Station, Glenn Dale, Md., where the genus is the subject of several studies.

A few miscellaneous introductions appear in this inventory from the special expedition to South America made by C. O. Erlanson and H. G. MacMillan for wild potatoes, the excellent results of which will be recorded in Inventory No. 111 and in subsequent bulletins and papers that will record the successful use of their collected plants in breeding disease-resistant potato varieties. Also related to the general project are the potatoes presented by Dr. V. P. Alekseev (97354–97374), which were developed by him at the Sukhum Subtropical Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus.

The botanical determinations have been made and the nomenclature determined by H. C. Skeels, who has had general supervision of this inventory.

KNOWLES A. RYERSON,
Principal Horticulturist, in Charge.

DIVISION OF FOREIGN PLANT INTRODUCTION,
Washington, D. C., June 5, 1933.

INVENTORY[1]

95552. KALANCHOE GLOBULIFERA COCCINEA Perrier. Crassulaceae.

From Germany. Seeds presented by Robert Blossfeld, Potsdam. Received January 5, 1932.

A stout branched succulent perennial up to a foot high, with elongated thick irregularly toothed obovate-spatulate leaves over 2 inches long and numerous bright scarlet flowers in large terminal corymblike cymes. Native to Madagascar.

For previous introduction see 79170.

95553. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

From Martos, Spain. Seeds presented by Frank H. Goll, Bureau of Plant Industry, United States Department of Agriculture. Received January 5, 1932.

A very sweet melon with a smooth deep-green skin.

95554 and 95555.

From Scotland. Seeds presented by Dr. J. W. Gregor, Scottish Society for Research in Plant Breeding, Corstorphine, Midlothian. Received January 5, 1932.

95554. PHLEUM ARENARIUM L. Poaceae. **Timothy.**

An annual tufted erect or ascending grass, up to a foot in height, with smooth leaves about an inch long and cylindrical spikes. It is native to Europe and the northern coast of Africa.

For previous introduction see 74170.

95555. PHLEUM PHLEOIDES (L.) Karst. Poaceae. **Timothy.**

A perennial gray-green loosely cespitose grass with short creeping rhizomes and stems 1 to 2 feet high. It is native to the dry stony places throughout central Europe.

For previous introduction see 78799.

95556 to 95560.

From China. Seeds collected by the Forrest expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received January 5, 1932.

95556. CASTANOPSIS sp. Fagaceae.

No. 30347.

95557. LILIUM NEPALENSE BURMANICUM W. W. Smith. Liliaceae. **Lily.**

A form having a perianth intermediate between the Martagon and Eulirion sections, and heavily blotched inside with purple.

95558. NOMOCHARIS PARDANTHINA Franch. Liliaceae.

A beautiful liliaceous plant about 3 feet high, which grows on grassy slopes on the outskirts of forests between 9,000 and 11,000 feet altitude. The leaves are ternate, and the large flowers, 3 inches across, are white, pink, purple, or red with deep irregular purple blotches and have salver-shaped corollas.

Forma *farreri*.

For previous introduction see 84020.

95559. STYRAX sp. Styracaceae.

No. 29552.

95560. THEA FORRESTII Diels. Theaceae.

A shrub 3 to 8 feet high with slender branches, ovate or lanceolate papery leaves about an inch long, and small creamy white flowers. Native to wooded gullies in Yunnan, China.

For previous introduction see 93395.

95561. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From China. Scions collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 7, 1932.

[1] It should be understood that the names of horticultural varieties of fruits, vegetables, cereals, and other plants used in this inventory are those under which the material was received when introduced by the Division of Foreign Plant Introduction, and, further, that the printing of such names here does not constitute their official publication and adoption in this country. As the different varieties are studied, their entrance into the American trade forecast, and the use of varietal names for them in American literature becomes necessary, the foreign varietal designations appearing in this inventory will be subject to change with a view to bringing the forms of the names into harmony with recognized horticultural nomenclature.

It is a well-known fact that botanical descriptions, both technical and economic, seldom mention the seeds at all and rarely describe them in such a way as to make possible identification from the seeds alone. Many of the unusual plants listed in these inventories are appearing in this country for the first time, and there are no seed samples or herbarium specimens with ripe seeds with which the new arrivals may be compared. The only identification possible is to see that the sample received resembles seeds of other species of the same genus or of related genera. The responsibility for the identifications therefore must necessarily often rest with the person sending the material. If there is any question regarding the correctness of the identification of any plant received from this division, herbarium specimens of leaves and flowers should be sent in so that definite identification can be made.

95561—Continued

Cassia flower chestnut. Collected in the foothills near Wusi.

95562 to 95575.

From the Union of Soviet Socialist Republics. Seeds presented by the director, Tiflis Botanic Garden, Tiflis, Georgia, Caucasus. Received January 7, 1932.

95562 to 95566. ACER spp. Aceraceae. **Maple.**

95562. ACER HYRCANUM Fisch. and Mey.

A southern European maple of compact habit, about 25 feet high, with bright-green 5-lobed leaves and greenish yellow flowers which are followed by winged fruits about an inch long.

For previous introduction see 90590.

95563. ACER MONSPESSULANUM IBERICUM (Bieb.) Pax. (*A. ibericum* Bieb.).

A form of the Montpelier maple with larger leaves, having the inner lobes slightly 3-lobed and obtuse. It is native to the Caucasus region.

For previous introduction see 90952.

95564. ACER INSIGNE Boiss. and Buhse.

A large tree with deeply cordate leaves 5 to 10 inches across, having coarsely crenate-serrate lobes. The flowers are borne in large erect panicles. It is native to the Caucasus region and northern Persia.

For previous introduction see 90591.

95565. ACER CAPPADOCICUM Gleditsch (*A. laetum* Meyer). **Coliseum maple.**

A tree up to 50 feet high, native to the Caucasus region and eastward to western China. The 5- to 7-lobed, cordate leaves are 3 to 6 inches across, and the yellow-green flowers, in upright corymbs, are followed by spreading winged fruits.

For previous introduction see 93076.

95566. ACER DIVERGENS Koch and Pax (*A. quinquelobum* Koch).

A tree, native to the Caucasus, with ash-brown bark and leathery 5-lobed leaves which are dark green above and pale beneath.

For previous introduction see 90589.

95567 to 95570. ALLIUM spp. Liliaceae. **Onion.**

95567. ALLIUM ALBIDUM Fisch.

A species with clustered oblong bulbs, very narrow semiterete leaves, and white or yellow-white flowers. Native to the southern part of the Union of Soviet Socialist Republics.

For previous introduction see 90594.

95568. ALLIUM LEPIDUM Kunth.

A rather small onion with semiterete leaves 3 to 4 inches high and a shorter scape bearing an umbel of purplish flowers. It is native to the Caucasus.

For previous introduction see 90601.

95569. ALLIUM PSEUDOSTRICTUM Albow.

An alpine onion about 8 inches high with flat linear leaves and pale-rose flowers in a small dense globular head

95562 to 95575—Continued

on a scape 10 inches high. Native to the southern part of the Union of Soviet Socialist Republics.

For previous introduction see 90602.

95570. ALLIUM VICTORIALIS L.

One of the most distinctive species of European onion with stems about 2 feet high, leaves resembling those of the lily-of-the-valley, and white or greenish-white flowers.

95571. ECBALLIUM ELATERIUM (L.) A. Rich. Cucurbitaceae. **Squirting-cucumber.**

A perennial trailing vine native to the Mediterranean countries, which is cultivated as an annual in gardens of the Temperate Zone. It is a curiosity because of its peculiar habit of violently ejecting its seeds and juice. A drug, elaterium, is obtained from the juice. In flower and foliage characters the plant closely resembles the cucumber, and the fruit is like a small green elliptical gourd covered with soft greenish prickles.

For previous introduction see 64188.

95572. SOLANUM NIGRUM L. Solanaceae. **Black nightshade.**

95573. SOLANUM DULCAMARA L. Solanacete. **Bitter nightshade.**

Received as *Solanum persicum*, which is a form with ovate-cordate, entire leaves.

95574. TAMARIX HOHENACKERI Bunge. Tamaricaceae. **Tamarisk.**

An evergreen tree, native to the Caucasus, with very small linear acute leaves and small flowers in racemes 1 or 2 inches long, appearing in the spring.

95575. TAMARIX PENTANDRA Pall. (*T. pallasii* Desv.). Tamaricaceae. **Tamarisk.**

A shrub or small tree with usually purple branches; the lanceolate to ovate leaves are glaucous or pale green; the large panicles of pink flowers are in dense racemes 1 to 2 inches long and appear in July and August. This tamarisk is found wild from the Balkan Peninsula through southern Europe to Turkistan and from Asia Minor to Persia.

For previous introduction see 42443.

95576 to 95579. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received January 7, 1932.

A collection of chestnuts introduced for the use of Department specialists.

95576. No. 1.
95577. No. 2.
95578. No. 3.
95579. No. 4.

95580. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

From India. Seeds presented by Jai Chand Luthra, professor of botany, Lyallpur, Punjab. Received January 11, 1932.

A mixed sample, purchased in the market.

95581. Poa sp. Poaceae. **Grass.**

From Canada. Seeds presented by Dr. G. P. McRostie, Department of Agronomy, Manitoba Agricultural College, Winnipeg. Received January 12, 1932.

One of the selections of *Poa flabellata*, selected out by Professor Roberts, who secured the seed from the Falkland Islands 5 years ago.

95582. Ficus callosa Willd. Moraceae. **Fig.**

From Ceylon. Seeds presented by T. H. Parsons, curator, Royal Botanic Gardens, Peradeniya. Received January 13, 1932.

A large tree, native to southeastern Asia, with hoary warted branchlets and rigid leathery elliptical leaves 5 to 8 inches long. The yellow pubescent fruits, 1 inch in diameter, are slightly pear shaped and are borne singly in the axils of the leaves.

95583 to 95592. Lycopersicon esculentum Mill. Solanaceae. **Tomato.**

From Manchuria. Seeds presented by M. Chara, Manshu Nosan Shokai, Inc., Dairen, southern Manchuria. Received January 13, 1932.

A collection of seeds from Manchuria and northern China.

95583. No. 1.
95584. No. 2.
95585. No. 3.
95586. No. 4.
95587. No. 5.
95588. No. 6.
95589. No. 7.
95590. No. 8.
95591. No. 9.
95592. No. 10.

95593. Manihot esculenta Crantz (*M. utilissima* Pohl). Suphorbiaceae. **Cassava.**

From the West Indies. Scions collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received January 14, 1932.

No. 2564. *John de Mott.* Presented by J. T. Brown, agricultural teacher, of Arthur Town, Cat Island, Bahamas. A very sweet cassava which is cultivated in the potholes of the limestone rock of Cat Island.

95594. Feronia limonia (L.) Swingle (*F. elephantum* Correa). Rutaceae. **Wood-apple.**

From French Indo-China. Seeds presented by M. Poilane, Institut des Recherches, Agronomique de l'Indochine Division de Botanique. Received December 22, 1931. Numbered in January, 1932.

A very graceful small thorny tree, native to India, where it thrives in exhausted soil in which no other tree can grow. The round fruits, about 2 inches in diameter, contain rather dry sweetish aromatic pulp, suitable for making jelly.

95595 and 95596.

From Cuba. Seeds presented by Juan T. Roig, Pinar del Río. Received January 15, 1932.

Two varieties of rice introduced for the use of Department specialists.

95595 and 95596—Continued

95595. Oryza cubensis Eckmann. Poaceae. **Rice.**

Received from Jobabo, Oriente, Cuba, where it grows wild in the lagoons. Apparently a wild rice which rather closely resembles the cultivated rice.

95596. Oryza latifolia Desv. Poaceae. **Rice.**

A perennial wild rice distributed throughout parts of tropical Asia, Africa, and America. The tufted stems become 6 to 8 feet high, and the plant is said to flower and produce seeds throughout the year. The smooth leaves are 1 to 2 feet long, and about an inch wide, and the erect spike is up to 4 inches long.

For previous introduction see 95517.

95597. Olearia myrsinoides erubescens (DC.) F. Muell. Asteraceae.

From Tasmania. Seeds presented by L. A. Evans, Sandy Bay, Hobart. Received January 14, 1932.

A low straggling shrub, native to Tasmania and Australia, with the branches, flower stems, and the under side of the leaves closely covered with silvery tomentum. The obovate leaves, 1 to 2 inches long, are shining and reticulate above, and the asterlike blue or white flower heads are clustered on axillary peduncles, forming a leafy panicle.

95598. Ficus carica L. Moraceae. **Common fig.**

From England. Cuttings presented by Col. F. E. Durham, through the Royal Horticultural Society, London. Received January 15, 1932.

Brown turkey.

95599 to 95610. Thalictrum spp. Ranunculaceae. **Meadowrue.**

From Switzerland. Seeds purchased from H. Correvon, Floraire Nurseries, Chêne-Bourg, Geneva. Received January 16, 1932.

Introduced for the use of Department specialists.

95599 and 95600. Thalictrum aquilegifolium L. **Columbine meadowrue.**

95601. Thalictrum chelidonii DC.

95602. Thalictrum delavayi Franch.

95603. Thalictrum dipterocarpum Franch. **Yunnan meadowrue.**

95604. Thalictrum fendleri Engelm.

95605. Thalictrum flexuosum Bernh.

95606. Thalictrum glaucum Desf. **Dusty meadowrue.**

95607. Thalictrum majus Jacq.

95608. Thalictrum minus L. **Low meadowrue.**

95609. Thalictrum odoratum Gren. and Godr.

95610. Thalictrum saxatile Vill.

95611 to 95614. Bougainvillea spp. Nyctaginaceae.

From Cuba. Cuttings presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received January 18, 1932.

95611 to 95614—Continued

A collection of floriferous seedlings grown at the Soledad Garden.

95611. BOUGAINVILLEA GLABRA × BUTAE (Crimson Lake).

No. 1.

95612 to 95614. BOUGAINVILLEA SPECTABILIS LATERITIA × BUTAE.

95612. No. 2.

95613. No. 14.

95614. No. 19.

95615. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From China. Seeds collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 18, 1932.

For the introduction of scions see 95561.

95616 to 95628.

From China. Seeds collected by the Forrest expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received January 18, 1932.

95616. ABIES sp. Pinaceae. **Fir.**

No. 29796.

95617. CREMANTHODIUM FARRERI W. W. Smith. Asteraceae.

No. 29889. A stately plant with pendulous globular-looking flowers of pure white, that deepen to dark dull claret as they die. The stems are up to 20 inches high, and the basal leaves, ovate and papery, are 4 to 5 inches long. Native to Upper Burma.

95618. CREMANTHODIUM sp. Asteraceae.

No. 29863.

95619. DAPHNIPHYLLUM BEDDOMII Craib. Euphorbiaceae.

A tropical tree becoming about 50 feet high, with rather thin oblong-lanceolate leaves 3 to 5 inches long and small white flowers in short axillary clusters. Native to Burma.

95620. EUONYMUS sp. Celastraceae.

No. 30379.

95621. LILIUM NEPALENSE BURMANICUM W. W. Smith. Liliaceae. **Lily.**

No. 29943.

For previous introduction and description see 95557.

95622. LILIUM OCHRACEUM Franch. Liliaceae. **Lily.**

No. 29944. A rare and beautiful lily from Burma, not hardy except in the most favorable districts; it is an admirable cool greenhouse plant. This is a very variable species, producing flowers which range in color from deep golden yellow to pale yellow stained in varying degrees with deep wine purple.

For previous introduction see 91632.

95623. MAGNOLIA ROSTRATA W. W. Smith. Magnoliaceae.

No. 29821. A deciduous tree native to western China, becoming 75 feet high. The leaves, congested toward the ends of the branchlets, are broadly ovate and a foot or more long. The rosy flowers, appearing very early, are up to 6 inches across.

95624. MAGNOLIA INSIGNIS Wall. Magnoliaceae.

No. 29747. A large tree, native to India, with lanceolate coriaceous leaves 6 inches long and fragrant pink flowers followed by bright-purple fruits 3 to 4 inches long.

95625. NOMOCHARIS PARDANTHINA FARRERI W. E. Evans. Liliaceae.

No. 29815. A plant about 2 feet high with whorls of dark-green lanceolate leaves and from 1 to 10 rose-pink to white flowers of variable shade, color, and spotting. Native to alpine slopes, among dwarf bamboos in Upper Burma. It differs from the type in having fimbriate inner perianth segments.

95626. NOMOCHARIS sp. Liliaceae.

No. 29942. Said to have red or purple-red flowers.

95627. THEA sp. Theaceae.

No. 29960.

95628. THEA sp. Theaceae.

95629. RHODODENDRON BRACHYCARPUM D. Don. Ericaceae. **Fujiyama rhododendron.**

From Japan. Seeds purchased from T. Sakata & Co., Yokohama, through Herbst Bros., New York, N.Y. Received January 20, 1932.

A shrub 10 to 15 feet high with elliptic to oblanceolate leaves 3 to 9 inches long, cuneate to auriculate at the base, dark green above and gray tomentose beneath. The broadly funnelform flowers, about 2 inches across, are white or yellow, striped and flushed pink, and spotted greenish brown. It is native to Japan and Chosen.

For previous introduction see 86750.

95630 to 95655.

From China. Material collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 19, 1932.

95650. DIOSPYROS SINENSIS Hemsl. Dios-

Seeds collected between Chuki and Tengchiao, Chekiang Province.

95631 to 95648. CASTANEA spp. Fagaceae. **Chestnut.**

95631 to 95633. CASTANEA HENRYI (Skan) Rehd. and Wils.

No. 3. *Chu Lee* or *Chun Lee*, pearl chestnut. Seeds and scions of an edible chestnut collected in Chekiang Province. The tree becomes 25 to 30 feet high, with oblong-lanceolate, long-acuminate leaves, green on both sides. The burs are either solitary or two in a bunch and contain usually but one nut.

95631. From Hsiaofeng.

95632. Scions from Fengchiao.

95633. From Fengchiao.

95634 to 95648. CASTANEA MOLLISSIMA Blume. **Hairy chestnut.**

95630 to 95655—Continued

95634 to 95640. Scions collected in Chekiang Province.

95634. No. 1. *Ya Lee Tzu,* wild chestnut. From Fengchiao.

95635. No. 2. *Kuei Lee,* large chestnut. From Fengchiao.

95636. No. 4. *Kuei Lee,* large chestnut. From Linanhsien.

95637. No. 6. *Pui Mao Lee,* white hairy chestnut. From Yühang.

97638. No. 5. *Kuei Lee,* large chestnut. From Yühang.

97639. No. 7. *Kuei Lee,* large chestnut. From Hangchow.

97640. No. 8. *Kuei Hua Lee,* cassia chestnut. From Hangchow.

95641 to 95648. Seeds.

95641. *Hing Kuo Nei Pi Lee,* black-skinned chestnut. From Ningkwohsien, Anhwei Province.

95642. *Han Lu,* cold dew chestnut. From North Mountain, Peiping, Chihli Province.

95643. *Tung Shan,* or East Mountain chestnut. Collected on East Mountain, about 60 miles northeast of Peiping, Chihli Province.

95644. *Kuei Lee,* large chestnut. From Linanhsien, Chekiang Province.

95645. *Kuei Lee,* large chestnut. From Hsiaofeng, Chekiang Province.

95646. *Kuei Lee,* large chestnut. From Fengchiao, Chekiang Province.

95647. *Hu Chaw Li Tzu,* tiger paw chestnut. From Peiping, Chihli Province.

95648. *Bai Mao Tzu,* white hairy chestnut. A rare variety obtained from a countrywoman at Tulilingkang, near Yühang.

95649. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

Ya shih, wild persimmon. Seeds collected by Mr. Chang at Kutang, near Hangchow.

95650. DIOSPYROS SINENSIS Hemsl. Diospyraceae. **Persimmon.**

Bai Pi Shih, white bark persimmon. Seeds collected by Mr. Chang at Kutang, near Hangchow. A small semievergreen Chinese tree with a short thick trunk, wide-spreading branches and spiny branchlets, thick oblong-lanceolate leaves 2 to 3 inches long, and globose or ovoid golden edible fruits nearly an inch in diameter.

For previous introduction see 78527.

95651 to 95653. PINUS BUNGEANA Zucc. Pinaceae. **Lacebark pine.**

Bai Kuo Sung. Seeds collected in the vicinity of Peiping.

95651. Collected near the Winter Palace.

95652. Collected at the Chieh Tai Ssu Temple, Western Hills.

95630 to 95655—Continued

95653. Collected at the Tan Chow Suu Temple, Western Hills.

95654. RUBUS sp. Rosaceae. **Raspberry.**

Seeds of a wild raspberry collected on the roadside between Chuki and Fengchiao, Chekiang Province.

95655. SAPIUM SEBIFERUM (L.) Roxb. Euphorbiaceae. **Chinese tallowtree.**

Chin Tzu. Seeds collected between Chuki and Fengchiao, Chekiang Province. The oil from the kernels of these seeds is used for making machine oil and the tallow from the outer skin for making candles.

95656. GOSSYPIUM DAVIDSONII Kellogg. Malvaceae. **Cotton.**

From San Marco Island, Baja California, Mexico. Seeds presented through E. H. Page, Oakland, Calif. Received January 21, 1932.

A shrub up to 5 feet high with broadly-cordate entire leaves densely velvety on both sides. The bright lemon-yellow flowers are 1 to 2 inches across and have a purple spot at the base of each petal. Native to Baja California.

For previous introduction see 93543.

95657 and 95658.

From Canada. Seeds presented by Prof. L. E. Kirk, Field Husbandry Department, University of Saskatchewan, Saskatoon. Received January 19, 1932.

A collection of grasses introduced for the use of Department specialists working with forage crops.

95657. AGROPYRON TENERUM Vasey. Poaceae. **Slender wheatgrass.**

For previous introduction see 91377.

95658. BROMUS INERMIS Leyss. Poaceae. **Common bromegrass.**

A perennial European grass, with creeping rhizomes and stems up to 30 inches high.

95659 and 95660. PRUNUS MUME Sieb. and Zucc. Amygdalaceae. **Japanese apricot.**

From Maryland. Cuttings presented by A. E. Merritt, Chevy Chase. Received January 19, 1932.

95659. A form with semidouble pink flowers.

95660. A form with single pink flowers.

95661 and 95662.

From the Union of Soviet Socialist Republics. Seeds presented by V. P. Alekseev, plant introducer, Sukhum Subtropical Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus. Received January 19, 1932.

95661. BUTIA CAPITATA × ERIOSPATHA. Phoenicaceae. **Palm.**

A natural hybrid combining characters of both parents. The fruit very closely resembles the best Japanese loquats, and the tree will probably thrive in every location where the Satsuma orange is a commercial crop.

95662. LAUROCERASUS OFFICINALIS Roemer (*Prunus laurocerasus* L.). Amygdalaceae. **English cherry-laurel.**

95661 and 95662—Continued

No. 41337. A very free-flowering, low-spreading evergreen shrub with narrow flat foliage. It is perhaps more hardy than the common type.

For previous introduction see 73857.

95663 and 95664. CASTANEA MOLLISSIMA Blume. Fagaceae. Hairy chestnut.

From China. Scions collected by Peter Liu and sent through Owen L. Dawson, agricultural commissioner, Shanghai. Received January 19, 1932.

Collected December 18, 1930 at the village of Huangchuan, near Shantung.

95663. *Ming Lee Tzu,* bright chestnut. A chestnut as large as the *Tiger paw,* which ripens about the middle of September.

95664. *Mao Lee Tzu,* hairy chestnut. A seedling chestnut which is not so large as the *Bright* chestnut, although the flavor is about the same. It ripens early in September.

95665 and 95666.

From the West Indies. Material collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received January 20, 1932.

Collected at Gun Point, Eleuthera Island, Bahamas, January 11, 1932.

95665. DIOSCOREA ALATA L. Dioscoreaceae. **Winged yam.**

No. 2581. Tubers of the white yam of the Bahamas, found growing in red rocky soil. It is of medium size, with a thin skin and flesh of good quality. This yam is grown on the ground, not on a trellis, and is considered at its best in the winter season, as it is then more mealy, being densely packed with starch at that time.

95666. MANIHOT ESCULENTA Crantz (*M. utilissima* Pohl). Euphorbiaceae. **Cassava.**

No. 2580. Cuttings of the variety *Abraham,* which is a rapid grower and the roots are of good quality. The farmers of Spanish Wells Island, Bahamas, consider this their best cassava, and a kind of bread is made of it there by grating the root and putting with it a small amount of grated sweetpotato. It tastes a little like a very dry pumpkin pie and is very nutritious.

95667 to 95681.

From the Netherlands. Plants purchased from C. G. Van Tubergen, Ltd., Zwanenburg Nurseries, Haarlem. Received January 21, 1932.

95667. BULBINELLA HOOKERI (Colenso) Cheeseman (*Anthericum hookeri* Colenso). Liliaceae.

A perennial herb, related to the asphodels, varying in size from 2 to 3 feet. The numerous glaucous-green leaves are linear, and the loose racemes of bright-yellow flowers are on slender scapes up to 10 inches long. It is native to New Zealand.

For previous introduction see 95477.

95668. STACHYS GRANDIFLORA (Steph.) Benth. Menthaceae.

95667 to 95681—Continued

A perennial herb 1 foot high, native to Asia Minor. The broadly cordate, obtusely crenate leaves are petioled at the base of the stem and reduce to sessile bracts at the top. The large showy flowers with curving tubes 1 inch long are borne in interrupted spikes.

Variety *superba.* Said to have flowers of intense mauve or a rich shade of purple-violet.

95669. BUPHTHALMUM SALICIFOLIUM L. Asteraceae. **Willowleaf oxeye.**

A perennial herb, native to northern Europe, with slightly serrate willowlike leaves and solitary flower heads with long yellow rays.

95670. DRACOCEPHALUM RUYSCHIANA L. Menthaceae. **Siberian dragonhead.**

A slightly pubescent herbaceous perennial about 2 feet high with linear-lanceolate entire leaves and interrupted spikes of 2-lipped purple flowers an inch long. It is native to Siberia.

95671. VANCOUVERIA HEXANDRA (Hook.) Morr. and Dec. (*Epimedium hexandrum* Hook.). Berberidaceae.

A perennial herb 1 foot high, native to northwestern America, with triternate leaves made up of angularly 3-lobed cordate leaflets and panicles of small white flowers.

95672. ERYNGIUM BOURGATI Gouan. Apiaceae. **Eryngo.**

A low herbaceous perennial, native to the Mediterranean region, with solitary sparingly branched stems 1 to 2 feet high. The rigid leathery reniform leaves are palmately 3- to 5-lobed and have spiny teeth, and the flower heads are blue or rarely green.

95673. ERYNGIUM VIOLETTA Hort. Apiaceae. **Eryngo.**

A name for which a place of publication and a description have not been found.

95674 and 95675. GALEGA OFFICINALIS L. Fabaceae. **Common goatsrue.**

95674. *Her Majesty.*

95675. *Niobe.*

95676. NEPETA MACRANTHA Fisch. Menthaceae.

Souvenir de André Chaudron. An erect branching herbaceous perennial with ovate-lanceolate leaves green on both sides and showy blue flowers 1 inch long in few-flowered cymes. It is native to the Altai region.

95677. PELARGONIUM ENDLICHERIANUM Fenzl. Geraniaceae. **Geranium.**

A perennial herb 1 to 2 feet high, native to western Asia. The slightly branched, somewhat fleshy stems bear cordate-orbicular obscurely 5-lobed crenate leaves and umbels of rose-colored flowers having the two upper petals much longer than the lower ones.

95678 to 95680. TRICYRTIS spp. Melanthiaceae. **Toadlily.**

95678. TRICYRTIS HIRTA Hook. **Hairy toadlily.**

A perennial herb, 1 to 3 feet high, covered with soft whitish spreading hairs. The cordate-lanceolate leaves clasp the stem, and the white lilylike flowers are covered with purple spots. It is native to Japan.

95667 to 95681—Continued

95679. TRICYRTIS MACROPODA Miquel. **Speckled toadlily.**

A perennial herb, 2 to 3 feet high, with oblong leaves and loose corymbs of light-purple flowers having minute dark-purple spots. It is native to China and Japan.

95680. TRICYRTIS PILOSA Wall.

A perennial herb, 2 to 4 feet high, native to the Himalayas between 5,000 and 6,000 feet altitude. The stems are slightly pilose, the leaves are oblong, and the numerous loosely corymbose flowers are whitish with large purple spots.

95681. ZEPHYRANTHES AJAX Sprenger. Amaryllidaceae. **Zephyrlily.**

A hybrid between *Zephyranthes candida* and *Z. citrina*. The 3 to 4 bright-green leaves, 10 to 12 inches long, appear in the spring and are evergreen in the South. The flowers, much larger than either of the parents, are pale canary yellow, brownish without and flushed with red and with a light-green throat. The perianth tube is entirely lacking, and the divisions are widely reflexed.

95682 to 95685. BROMUS INERMIS Leyss. Poaceae. **Common bromegrass.**

From Canada. Seeds presented by Prof. L. E. Kirk, Field Husbandry Department, University of Saskatchewan, Saskatoon. Received January 19, 1932.

Seeds of the 1931 crop, introduced for the use of Department specialists.

For previous introduction and description see 95658.

95682. (S-23-37-3-1-1).

95683. (S-13-1-2-1).

95684. (S-37-3-2-1).

95685. (S-35-1-5-2).

95686. EUCHLAENA MEXICANA Schrad. Poaceae. **Teosinte.**

From Guatemala. Seeds presented by Wilson Popenoe, research department, United Fruit Co., Guatemala City. Received January 25, 1932.

A coarse annual grass, native to Mexico, where it was cultivated in prehistoric times. It resembles corn rather closely and some botanists consider that corn is a hybrid of which teosinte is one of the parents.

For previous introduction see 93264.

95687. CARICA PAPAYA L. Papayaceae. **Papaya.**

From the island of Guam. Seeds presented by C. W. Edwards, director, Agricultural Experiment Station. Received January 25, 1932.

Selected seed.

95688 to 95705.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received January 25, 1932.

95688 to 95705—Continued

95688. ACHRAS ZAPOTA L. Sapotaceae. **Sapodilla.**

No. 2565. *Lady finger*. Collected on Cat Island, Bahamas. A small symmetrical tree 25 feet high, with shiny dark-green leathery leaves and round or oblong fleshy fruits resembling in outward appearance a smooth-skinned brown potato. It is native to tropical America, although it is now cultivated in the Asiatic Tropics as well. When thoroughly ripe the fruit is fine eating, a very thin skin enclosing a pale-brown juicy pulp of delicious flavor. The bark contains a milky latex known commercially as chicle. The tree is best propagated from cuttings, although it may also be raised from seeds.

For previous introduction see 93298.

95689. CISSUS INTERMEDIA A. Rich. Vitaceae.

No. 2558. *Bull vine*. Collected January 3, 1932, at Grant Town and Nassau, New Providence Island. A slender slightly fleshy vine 6 to 10 feet long, native to the West Indies. The trifoliolate leaves have oblong-lanceolate serrate leaflets 1 to 2 inches long, and the compound cymes of red flowers are followed by subglobose black berries on red pedicels.

95690. CONOCARPUS ERECTA L. Combretaceae.

No. 2568. Collected January 4, 1932, at Arthur Town, Cat Island, Bahamas, *Buttonwood*. Variety *sericea*. A silky pubescent shrub or tree from 3 to 60 feet high with angled or winged branchlets. The elliptic or ovate, densely tomentose leaves are 1 to 2 inches long, and the inconspicuous flowers, borne in small heads, are followed by reddish-brown fruits one half inch long. It is native to the seacoasts of Florida, the West Indies, tropical America, and western tropical Africa.

95691. FICUS JACQUINIAEFOLIA A. Rich. Moraceae. **Fig.**

No. 2553. Collected January 1, 1932 at Nassau, New Providence Island, Bahamas. A small-leaved wild fig which produces small, purple, sweetish fruits about an inch long.

95692. GALACTIA STRIATA (Jacq.) Urban. Fabaceae.

No. 5. Collected January 5, 1932, on Conception Island, Bahamas. A rather strong-growing viny plant with pink pea-like flowers.

95693. IPOMOEA TUBA (Schlecht.) Don. Convolvulaceae.

No. 6. Collected January 5, 1932, on Conception Island. A fleshy climbing vine up to 30 feet long with ovate-orbicular leaves 3 to 5 inches long and white flowers having five narrow greenish bands. It is native to the West Indies and tropical America.

9569. JACQUEMONTIA JAMAICENSIS (Jacq.) Hallier f. Convolvulaceae.

No. 2554. Collected January 1, 1932, at Nassau, New Providence, Bahamas. A vine with small narrow leaves and small white flowers with pointed petals.

95695. BOURRERIA OVATA Miers. Boraginaceae.

No. 2571. *Strong back*. Collected on Rum Key, Bahamas, January 6, 1932. A

95688 to 95705—Continued

shrub with glossy green leaves, fragrant white flowers, and small yellow edible fruits. Under cultivation this may prove a good hedge plant for rocky pineland.

95696 to 95698. PASSIFLORA spp. Passifloraceae.

95696. PASSIFLORA CUPRAEA L.

No. 2562. Collected near Arthur Town, Cat Island, Bahamas, January 4, 1932. A rather attractive vine with dark-brown leathery leaves and flowers of a coppery hue. The small fruits, the size of marbles, turn dark purple or almost black when ripe.

95697 and 95698. PASSIFLORA PECTINATA Griseb.

A red-fruited species with attractive foliage of thickish dark-green leaves.

95697. No. 2569. Collected January 5, 1932 on Conception Island.

95698. No. 2569-A, Collected January 6, 1932 on Rum Key.

95699. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

No. 2566. Collected January 4, 1932 on Cat Island. A white or yellowish-white flowered bean with pure white beans which is a vigorous grower and may be a perennial. It is cultivated in the cornfields here by the colored folks who eat it wher they cannot get the pigeonpea.

95700. PHOENIX ROEBELENII O'Brien. Phoenicaceae. **Roebelen date palm.**

No. 2560. Collected at Old Fort, Nassau, New Providence Island, January 31, 1932.

For previous introduction see 75225.

95701. PINUS PINEA L. Pinaceae. **Italian stone pine.**

No. 7. A large tree up to 80 feet high, with long horizontal branches eventually forming a flat crown. The rigid acute bright-green leaves are 5 to 8 inches long, and the broadly ovate chestnut-brown cones, 4 to 6 inches long, bear reddish-brown seeds nearly 1 inch long. It is native to southern Europe.

95702 and 95703. SESAMUM ORIENTALE L. Pedaliaceae. **Sesame.**

95702. No. 8. Collected on Cat Island.

95703. No. 2556. *Benni* seed. Collected January 2, 1932 at Nassau, New Providence Island. A white-seeded strain. A good cooking oil is made from the seed and is used in making cakes and candies.

95704. GOUANIA LUPULOIDES (L.) Urban. Rhamnaceae.

No. 2559. Collected January 3, 1932 near Grant Town, Nassau, New Providence Island. A woody vine, native to the West Indies up to 25 feet high, climbing by coiled tendrils. The thin cordate serrate leaves are 1 to 4 inches long; the small yellow flowers are borne in pubescent racemes and are followed by broadly winged fruits half an inch long.

95705. TALINUM PANICULATUM (Jacq.) Gaertn. Portulacaceae.

No. 2567. Collected January 2, 1932 near Grant Town, Nassau, New Providence Island. An ornamental shrub with

95688 to 96705—Continued

smooth dark-green slightly fleshy obovate leaves and loose panicles of deep pink flowers followed by tiny papery pods, filled with dark-brown seeds.

For previous introduction see 68863.

95706 to 96383. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Chosen. Seeds arranged for by the Dorsett and Morse expedition and sent through the American consulate at Tokyo, Japan. Received January 26, 1932.

A collection of soybeans presented by the Seisen Shijo (western branch) of the Agricultural Experiment Station of the Chosen Government, Shariin, October 24, 1931.

95706 to 95718. From the Zenra-Nando Prefecture.

95706. No. 7971. Station no. 1. Medium size, straw-yellow with dark-brown hilum; heavily mottled with brown.

95707. No. 7972. Station no. 2. Medium large, olive-yellow with dark brown hilum; slightly mottled with brown.

95708. No. 7973. Station no. 3. Medium small green with brown hilum; green germ; slightly mottled with brown.

95709. No. 7974. Station no. 4. Medium size, straw to olive-yellow with a pale hilum; slightly mottled with brown.

95710. No. 7975. Station no. 5. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95711. No. 7976. Station no. 6. Medium size, straw to olive-yellow with pale hilum; slightly mottled with brown.

95712. No. 7977. Station no. 7. Medium size, black with yellow germ.

95713. No. 7978. Station no. 8. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95714. No. 7979. Station no. 9. Medium size, straw-yellow with brown hilum; slightly flattened; slightly mottled with brown.

95715. No. 7980. Station no. 10. Medium small, green with light-brown hilum; germ green.

95716. No. 7981. Station no. 11. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95717. No. 7982. Station no. 12. Medium size, straw to olive-yellow with pale hilum; slightly mottled with brown.

95718. No. 7983. Station no. 13. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95719 to 95740. From the Zenra-Hokudo Prefecture.

95719. No. 7984. Station no. 14. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95720. No. 7985. Station no. 15. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95706 to 96383—Continued

95721. No. 7986. Station no. 16. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95722. No. 7987. Station no. 17. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95723. No. 7988. Station no. 18. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95724. No. 7989. Station no. 19. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95725. No. 7990. Station no. 20. Medium size, straw to olive-yellow with pale hilum; heavily mottled with brown.

95726. No. 7991. Station no. 21. Medium large, straw-yellow with pale hilum; mottled with brown. Seed coat slightly wrinkled and split.

95727. No. 7992. Station no. 22. Large size, straw- to olive-yellow with pale hilum; slightly mottled with brown.

95728. No. 7993. Station no. 23. Medium large, straw-yellow with pale hilum; mottled with brown.

95729. No. 7994. Station no. 24. Medium size, straw-yellow with pale helium; slightly mottled with brown.

95730. No. 7995. Station no. 25. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95731. No. 7996. Station no. 26. Medium size, straw-yellow with pale hilum; mottled with brown.

95732. No. 7997. Station no. 27. Medium size, straw- to olive-yellow with pale hilum; slightly mottled with brown.

95733. No. 7998. Station no. 28. Medium large, straw- to olive-yellow with pale hilum; heavily mottled with brown.

95734. No. 7999. Station no. 29. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95735. No. 8000. Station no. 30. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95736. No. 8001. Station no. 31. Medium size, straw-yellow with pale hilum.

95737. No. 8002. Station no. 32. Large size, straw-yellow with pale hilum.

95738. No. 8003. Station no. 33. Medium size, straw-yellow with pale hilum.

95739. No. 8004. Station no. 34. Medium large, straw-yellow with brown hilum; slightly mottled with brown.

95740. No. 8005. Station no. 35. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95741 to 95776. From the Keisho-Nando Prefecture.

95741. No. 8006. Station no. 36. Medium small, straw-yellow with dark-brown hilum.

95742. No. 8007. Station no. 37. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95706 to 96383—Continued

95743. No. 8008. Station no. 38. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95744. No. 8009. Station no. 39. Medium size, straw-yellow, slightly flattened; dark-brown hilum; slightly mottled with brown.

95745. No. 8010. Station no. 40. Medium size, straw-yellow with pale hilum.

95746. No. 8011. Station no. 41. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

95747. No. 8012. Station no. 42. Medium large, straw-yellow with pale hilum.

95748. No. 8013. Station no. 43. Medium small, straw-yellow with pale hilum; slightly flattened and slightly mottled with brown.

95749. No. 8014. Station no. 44. Medium small, straw-yellow with dark-brown hilum; heavily mottled with brown.

95750. No. 8015. Station no. 45. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

95751. No. 8016. Station no. 46. Medium small, straw-yellow with brown hilum.

95752. No. 8017. Station no. 47. Medium large, straw-yellow to olive yellow with pale hilum; slightly mottled with brown.

95753. No. 8018. Station no. 48. Medium small, straw-yellow with pale hilum; heavily mottled with black and brown.

95754. No. 8019. Station no. 49. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95755. No. 8020. Station no. 50. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95756. No. 8021. Station no. 51. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95757. No. 8022. Station no. 52. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95758. No. 8023. Station no. 53. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

95759. No. 8024. Station no. 54. Medium small, straw-yellow with dark-brown hilum; slightly mottled.

95760. No. 8025. Station no. 55. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95761. No. 8026. Station no. 56. Medium large, straw-yellow with pale hilum; mottled with brown.

95762. No. 8027. Station no. 57. Medium size, pale-straw yellow with light-brown hilum.

95763. No. 8028. Station no. 58. Medium size, straw-yellow with dark-brown hilum; heavily mottled with brown.

95764. No. 8029. Station no. 59. Medium size, straw-yellow with dark-brown hilum; slightly mottled with brown.

95706 to 96383—Continued

95765. No. 8030. Station no. 60. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95766. No. 8031. Station no. 61. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95767. No. 8032. Station no. 62. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95768. No. 8033. Station no. 63. Medium large, straw-yellow with pale hilum.

95769. No. 8034. Station no. 64. Medium small, straw- to olive-yellow with brown hilum; heavily mottled with brown.

95770. No. 8035. Station no. 65. Medium size, light straw-yellow with dark hilum; slightly mottled with brown.

95771. No. 8036. Station no. 66. Medium size, light straw-yellow with dark-brown hilum; mottled with brown.

95772. No. 8037. Station no. 67. Medium size, light straw-yellow with dark-brown hilum; mottled with brown.

95773. No. 8038. Station no. 68. Medium size, green with brown hilum; slightly mottled with brown.

95774. No. 8039. Station no. 69. Medium large, straw-yellow with pale hilum; heavily mottled with brown. Wrinkled and split.

95775. No. 8040. Station no. 70. Medium size, straw-yellow with dark-brown hilum; slightly mottled with brown.

95776. No. 8041. Station no. 71. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95777 to 95828. From the Keisho-Hokudo Prefecture.

95777. No. 8042. Station no. 72. Medium size, straw-yellow with pale hilum.

95778. No. 8043. Station no. 73. Medium size, straw-yellow with pale hilum.

95779. No. 8044. Station no. 74. Medium large, straw-yellow with pale hilum; mottled with brown.

95780. No. 8045. Station no. 75. Medium size, olive-yellow with pale hilum; heavily mottled with brown.

95781. No. 8046. Station no. 76. Medium size, straw-yellow with brown hilum.

95782. No. 8047. Station no. 77. Medium size, straw to greenish yellow with pale hilum.

95783. No. 8048. Station no. 78. Medium size, straw-yellow with pale hilum; slightly mottled.

95784. No. 8049. Station no. 79. Medium large, straw to greenish yellow with pale hilum; mottled with brown.

95785. No. 8050. Station no. 80. Medium large, straw-yellow with pale hilum. Seed coat more or less cracked.

95706 to 96383—Continued

95786. No. 8051. Station no. 81. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95787. No. 8052. Station no. 82. Medium large, olive-yellow with pale hilum; very heavily mottled with dark brown.

95788. No. 8053. Station no. 83. Medium large, straw-yellow with pale hilum; mottled with brown.

95789. No. 8054. Station no. 84. Medium size, straw-yellow with pale hilum; slightly mottled with brown; seed coat more or less wrinkled and cracked.

95790. No. 8055. Station no. 85. Medium size, straw to olive-yellow with pale hilum; heavily mottled with dark brown.

95791. No. 8056. Station no. 86. Large size, straw to greenish yellow with pale hilum; mottled with brown.

95792. No. 8057. Station no. 87. Medium large, straw-yellow with brown hilum; mottled with brown.

95793. No. 8058. Station no. 88. Medium large, straw- to olive-yellow with pale hilum; seed coat more or less wrinkled and cracked; slightly mottled.

95794. No. 8059. Station no. 89. Medium size, pale straw-yellow with pale hilum.

95795. No. 8060. Station no. 90. Medium size, straw-yellow with brown hilum.

95796. No. 8061. Station no. 91. Medium size, straw-yellow with brown hilum.

95797. No. 8062. Station no. 92. Medium size, straw-yellow with pale hilum; mottled with brown.

95798. No. 8063. Station no. 93. Medium large, straw-yellow with pale hilum; mottled with brown.

95799. No. 8064. Station no. 94. Medium size, straw- to olive-yellow with pale hilum; mottled with brown.

95800. No. 8065. Station no. 95. Medium size, straw-yellow with pale hilum; mottled slightly.

95801. No. 8066. Station no. 96. Medium size, straw-yellow with dark-brown hilum; seed coat wrinkled and cracked.

95802. No. 8067. Station no. 97. Medium large, straw-yellow with pale hilum; slightly mottled.

95803. No. 8068. Station no. 98. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

95804. No. 8069. Station no. 99. Medium large, olive-yellow with pale hilum; slightly mottled with brown. Seed coat somewhat wrinkled and split.

95805. No. 8070. Station no. 100. Medium small, black. Yellow germ. Slightly flattened.

95806. No. 8071. Station no. 101. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95706 to 96383—Continued

95807. No. 8072. Station no. 102. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95808. No. 8073. Station no. 103. Medium size, straw- to olive-yellow with pale hilum; heavily mottled with dark brown.

95809. No. 8074. Station no. 104. Medium size, straw-yellow with brown hilum; mottled with brown.

95810. No. 8075. Station no. 105. Medium size, straw-yellow with pale hilum; mottled with brown.

95811. No. 8076. Station no. 106. Medium large, straw-yellow with pale hilum; mottled with brown.

95812. No. 8077. Station no. 107. Medium size, straw- to greenish-yellow, pale hilum; slightly mottled with brown.

95813. No. 8078. Station no. 108. Medium size, straw- to olive-yellow with pale hilum.

95814. No. 8079. Station no. 109. Medium large, straw- to olive-yellow with pale hilum; seed coat more or less wrinkled and cracked.

95815. No. 8080. Station no. 110. Medium large, straw-yellow with pale hilum; mottled with brown.

95816. No. 8081. Station no. 111. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95817. No. 8082. Station no. 112. Medium size, straw to greenish yellow, pale hilum; slightly mottled with brown.

95818. No. 8083. Station no. 113. Medium large, straw-yellow with pale hilum; evidence of purple spot on seed.

95819. No. 8084. Station no. 114. Medium size, straw-yellow with pale hilum.

95820. No. 8085. Station no. 115. Medium size, straw-yellow with pale hilum.

95821. No. 8086. Station no. 116. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95822. No. 8087. Station no. 117. Medium size, straw-yellow with pale hilum; mottled with dark brown.

95823. No. 8088. Station no. 118. Medium size, straw-yellow with pale hilum.

95824. No. 8089. Station no. 119. Medium size, straw-yellow with pale hilum; slightly mottled.

95825. No 8090. Station no. 120. Medium large, straw- to olive-yellow with pale hilum; slightly mottled.

95826. No. 8091. Station no. 121. Medium size, straw-yellow with pale hilum; slightly mottled.

95827. No. 8092. Station no. 122. Medium size, straw- to olive-yellow with pale hilum; slightly mottled.

95828. No. 8093. Station no. 123. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95829 to 95866. From the Chusei-Nando Prefecture.

95706 to 96383—Continued

95829. No. 8094. Station no. 124. Medium size, straw-yellow with pale hilum; mottled with brown.

95830. No. 8095. Station no. 125. Medium large, straw-yellow with dark-brown hilum; mottled slightly.

95831. No. 8096. Station no. 126. Medium large, straw-yellow with dark-brown hilum; slightly mottled.

95832. No. 8097. Station no. 127. Medium large, straw-yellow with brown hilum; slightly mottled.

95833. No. 8098. Station no. 128. Medium size, straw-yellow with pale hilum; mottled with brown.

95834. No. 8099. Station no. 129. Medium size, straw-yellow with pale hilum; mottled with brown.

95835. No. 8100. Station no. 130. Medium large, olive-brown with yellow germ.

95836. No. 8101. Station no. 131. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

95837. No. 8102. Station no. 132. Medium size, straw to olive-yellow with pale hilum; slightly mottled with brown.

95838. No. 8103. Station no. 133. Medium size, straw-yellow with pale hilum; mottled with brown.

95839. No. 8104. Station no. 134. Medium large, straw to olive-yellow with pale hilum; mottled with brown; seed coat slightly wrinkled and cracked.

95840. No. 8105. Station no. 135. Medium large, olive-green mottled with black; black hilum.

95841. No. 8106. Station no. 136. Medium large, straw to olive-yellow with pale hilum; slightly mottled with brown.

95842. No. 8107. Station no. 137. Medium small, straw-yellow with pale hilum; heavily mottled with brown.

95843. No. 8108. Station no. 138. Medium size, straw-yellow with slate-black hilum; slightly mottled.

95844. No. 8109. Station no. 139. Medium size, straw-yellow with pale hilum; mottled with brown.

95845. No. 8110. Station no. 140. Medium small, straw-yellow with pale hilum; heavily mottled with brown.

95846. No. 8111. Station no. 141. Medium small, olive-yellow with light-brown hilum; heavily mottled with brown.

95847. No. 8112. Station no. 142. Medium size, straw to olive-yellow with brown hilum; heavily mottled with brown.

95848. No. 8113. Station no. 143. Medium large, straw-yellow, mottled with brown.

95849. No. 8114. Station no. 144. Large size, straw to olive-yellow with pale hilum; slightly mottled with brown; seed coat somewhat wrinkled and split.

95850. No. 8115. Station no. 145. Medium large, olive-yellow with black hilum; heavily mottled with black.

95706 to 96383—Continued

95851. No. 8116. Station no. 146. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95852. No. 8117. Station no. 147. Medium size, green with black hilum; germ green; seed coat somewhat wrinkled and split.

95853. No. 8118. Station no. 148. Medium size, straw-yellow with pale hilum; mottled with brown.

95854. No. 8119. Station no. 149. Medium size, straw-yellow with pale hilum.

95855. No. 8120. Station no. 150. Medium size, straw- to olive-yellow with pale hilum.

95856. No. 8121. Station no. 151. Medium large, straw- to olive-yellow with pale hilum; slightly mottled with brown.

95857. No. 8122. Station no. 152. Medium size, straw-yellow with pale hilum; mottled with brown.

95858. No. 8123. Station no. 153. Medium large, straw-yellow with black hilum; mottled with black.

95859. No. 8124. Station no. 154. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95860. No. 8125. Station no. 155. Medium size, light straw-yellow with brown hilum; heavily mottled with brown.

95861. No. 8126. Station no. 156. Medium large, light straw-yellow with brown hilum.

95862. No. 8127. Station no. 157. Medium size, straw-yellow with brown hilum.

95863. No. 8128. Station no. 158. Medium size, straw-yellow with light-brown hilum; slightly mottled.

95864. No. 8129. Station no. 159. Medium size, straw-yellow with pale hilum; mottled with brown.

95865. No. 8130. Station no. 160. Medium size, yellowish green with green germ and slate-black hilum.

95866. No. 8131. Station no. 161. Medium large, brown with network of white on each side.

95867 to 95899. From the Chusei-Hokudo Prefecture.

95867. No. 8132. Station no. 162. Medium size, straw-yellow with brown hilum; slightly mottled.

95868. No. 8133. Station no. 163. Medium large, straw-yellow with pale hilum; slightly mottled with brown; seed coat more or less wrinkled and cracked.

95869. No. 8134. Station no. 164. Medium large, straw- to olive-yellow with pale hilum; mottled with brown.

95870. No. 8135. Station no. 165. Medium size, straw- to olive-yellow with pale hilum.

95871. No. 8136. Station no. 166. Medium large, straw- to olive-yellow with pale hilum; mottled with brown.

95706 to 96383—Continued

95872. No. 8137. Station no. 167. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95873. No. 8138. Station no. 168. Medium size, straw-yellow with pale hilum.

95874. No. 8139. Station no. 169. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95875. No. 8140. Station no. 170. Medium size, straw-yellow with pale hilum.

95876. No. 8141. Station no. 171. Medium size, straw-yellow with pale hilum; mottled with brown.

95877. No. 8142. Station no. 172. Medium size, straw-yellow with pale hilum.

95878. No. 8143. Station no. 173. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95879. No. 8144. Station no. 174. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95880. No. 8145. Station no. 175. Medium size, straw-yellow with pale hilium; slightly mottled with brown.

95881. No. 8146. Station no. 176. Medium size, light straw-yellow with light-brown hilum.

95882. No. 8147. Station no. 177. Medium large, straw- to olive-yellow, pale hilum; slightly mottled with brown.

95883. No. 8148. Station no. 178. Medium size, straw-yellow with pale hilum.

95884. No. 8149. Station no. 179. Medium size, straw-yellow with pale hilum; mottled with brown.

95885 and 95886. Medium size, straw-yellow with pale hilum.

95885. No. 8150. Station no. 180.

95886. No. 8151. Station no. 181.

95887. No. 8152. Station no. 182. Medium size, straw-yellow with pale hilum; mottled with brown.

95888 to 95892. Medium size, straw-yellow with pale hilum.

95888. No. 8153. Station no. 183.

95889. No. 8154. Station no. 184.

95890. No. 8155. Station no. 185.

95891. No. 8156. Station no. 186.

95892. No. 8157. Station no. 187.

95893 to 95895. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95893. No. 8158. Station no. 188.

95894. No. 8159. Station no. 189.

95895. No. 8160. Station no. 190.

95896. No. 8161. Station no. 191. Medium size, straw-yellow with pale hilum; affected some by purple spot.

95897 to 95899. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95897. No. 8162. Station no. 192.

95898. No. 8163. Station no. 193.

95706 to 96383—Continued

95899. No. 8164. Station no. 194.

95900 to 95944. From the Keikido Prefecture.

95900. No. 8165. Station no. 195. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95901. No. 8166. Station no. 196. Medium size, straw-yellow with pale hilum.

95902. No. 8167. Station no. 197. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95903. No. 8168. Station no. 198. Medium size, straw-yellow with pale hilum.

95904 to 95916. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95904. No. 8169. Station no. 199.

95905. No. 8170. Station no. 200.

95906. No. 8171. Station no. 201.

95907. No. 8172. Station no. 202.

95908. No. 8173. Station no. 203.

95909. No. 8174. Station no. 204.

95910. No. 8175. Station no. 205.

95911. No. 8176. Station no. 206.

95912. No. 8177. Station no. 207.

95913. No. 8178. Station no. 208.

95914. No. 8180. Station o. 209.

95915. No. 8180. Station no. 210.

95916. No. 8181. Station no. 211.

95917 and 95918. Medium size, straw-yellow with pale hilum; mottled with brown.

95917. No. 8182. Station no. 212.

95918. No. 8183. Station no. 213.

95919. No. 8184. Station no. 214. Medium size; straw-yellow with pale hilum.

95920. No. 8185. Station no. 215. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95921 to 95923. Medium size, straw-yellow with pale hilum; mottled with brown.

95921. No. 8186. Station no. 216.

95922. No. 8187. Station no. 217.

95923. No. 8188. Station no. 218.

95924 and 95925. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95924. No. 8189. Station no. 219.

95925. No. 8190. Station no. 220.

95926. No. 8191. Station no. 221. Medium size, straw-yellow with brown hilum; mottled with brown; slightly affected with purple spot.

95927. No. 8192. Station no. 222. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

95928. No. 8193. Station no. 223. Medium large, straw- to yellow-green with pale hilum; slightly mottled with brown.

95929 and 95930. Medium size, straw-yellow with pale hilum.

95706 to 96383—Continued

95929. No. 8194. Station no. 224.

95930. No. 8195. Station no. 225.

95931 and 95932. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95931. No. 8196. Station no. 226.

95932. No. 8197. Station no. 227.

95933 and 95934. Medium size, straw-yellow with pale hilum; slightly mottled.

95933. No. 8198. Station no. 228.

95934. No. 8199. Station no. 229.

95935. No. 8200. Station no. 230. Medium size, straw-yellow with pale hilum.

95936 and 95937. Medium size, straw-yellow with pale hilum; mottled with brown.

95936. No. 8201. Station no. 231. Slightly mottled.

95937. No. 8202. Station no. 232.

95938 to 95940. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95938. No. 8203. Station no. 233.

95939. No. 8204. Station no. 234.

95940. No. 8205. Station no. 235.

95941. No. 8206. Station no. 236. Medium size, straw-yellow with pale hilum; mottled with brown.

95942 and 95943. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95942. No. 8207. Station no. 237.

85943. No. 8208. Station no. 238.

95944. No. 8209. Station no. 239. Medium size, straw-yellow with pale hilum; mottled with brown.

95945 to 96000. From the Kogendo Prefecture.

95945. No. 8210. Station no. 240. Large size, straw-yellow with pale hilum.

95946. No. 8211. Station no. 241. Large size, light straw-yellow with pale hilum; mottled with brown.

95947. No. 8212. Station no. 242. Medium size, straw-yellow with pale hilum; mottled with brown.

95948. No. 8213. Station no. 243. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95949. No. 8214. Station no. 244. Medium size, straw-yellow with pale hilum; seed coat more or less wrinkled and split.

95950. No. 8215. Station no. 245. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

95951 and 95952. Medium large, straw- to olive-yellow with pale hilum; mottled with brown.

95951. No. 8216. Station no. 246.

95952. No. 8217. Station no. 247.

95953. No. 8218. Station no. 248. Medium large, straw- to olive-yellow with pale hilum; slightly mottled with brown.

95706 to 96383—Continued

95954. No. 8219. Station no. 249. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95955. No. 8220. Station no. 250. Medium large, straw-yellow with brown hilum; mottled with brown.

95956. No. 8221. Station no. 251. Medium large, straw-yellow with brown hilum.

95957. No. 8222. Station no. 252. Medium large, straw-yellow with pale hilum.

95958. No. 8223. Station no. 253. Medium large, straw- to olive-yellow with pale hilum; slightly mottled with brown.

95959. No. 8224. Station no. 254. Medium large, straw-yellow with brown hilum; slightly mottled with brown.

95960. No. 8225. Station no. 255. Medium large, straw-yellow with brown hilum; slightly mottled with brown; seed coat more or less wrinkled and cracked.

95961. No. 8226. Station no. 256. Medium large, straw-yellow with brown hilum; heavily mottled with brown.

95962. No. 8227. Station no. 257. Medium large, straw- to olive-yellow with pale hilum; seed coat more or less wrinkled and split.

95963. No. 8228. Station no. 258. Medium large, straw-yellow with pale hilum; slightly mottled with brown; seed coat more or less wrinkled and cracked.

95964. No. 8229. Station no. 259. Medium large, straw- to olive-yellow with pale hilum; seed coat more or less wrinkled and split.

95965. No. 8230. Station no. 260. Medium large, straw- to olive-yellow with pale hilum; seed coat wrinkled.

95966 and 95967. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95966. No. 8231. Station no. 261.

95967. No. 8232. Station no. 262.

95968. No. 8233. Station no. 263. Medium size, straw- to olive-yellow with pale hilum; slightly mottled with brown.

95969 to 95972. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95969. No. 8234. Station no. 264.

95970. No. 8235. Station no. 265.

95971. No. 8236. Station no. 266.

95972. No. 8237. Station no. 267.

95973. No. 8238. Station no. 268. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

95974. No. 8239. Station no. 269. Medium large, straw- to olive-yellow with pale hilum; slightly mottled with brown; seed coat more or less wrinkled and split.

95975. No. 8240. Station no. 270. Medium large, straw-yellow with pale hilum; mottled with brown.

95706 to 96383—Continued

95976. No. 8241. Station no. 271. Large size, straw-yellow with pale hilum; heavily mottled with dark brown.

95977. No. 82842. Station no. 272. Large size, straw-yellow with pale hilum; heavily mottled with brown and affected with purple spot.

95978. No. 8243. Station no. 273. Large size, straw-yellow with pale hilum; seed coat wrinkled.

95979. No. 8244. Station no. 274. Medium large, straw-yellow with pale hilum; mottled with brown; seed coat more or less wrinkled and split.

95980. No. 8245. Station no. 275. Large size, straw-yellow with pale hilum; heavily mottled with brown; seed coat wrinkled and split.

95981. No. 8246. Station no. 276. Large size, straw-yellow with pale hilum; slightly mottled with brown; seed coat wrinkled and split.

95982. No. 8247. Station no. 277. Large size, straw-yellow with pale hilum; mottled with brown; seed coat more or less wrinkled.

95983. No. 8248. Station No. 278. Large size, straw-yellow with pale hilum; heavily mottled with brown; seed coat more or less wrinkled.

95984. No. 8249. Station no. 279. Large size, straw-yellow with brown hilum; seed coat somewhat wrinkled and split.

95985. No. 8250. Station no. 280. Large size, straw-yellow with brown hilum; slightly mottled with brown.

95986. No. 8251. Station no. 281. Large size, straw-yellow with light-brown hilum; mottled with brown; seed coat heavily wrinkled and split.

95987. No. 8252. Station no. 282. Large size, straw-yellow with brown hilum; seed coat wrinkled and split.

95988. No. 8253. Station no. 283. Large size, straw-yellow wth brown hilum; mottled with brown; seed coat wrinkled and split.

95989. No. 8254. Station no. 284. Medium large, straw-yellow with light-brown hilum.

95990. No. 8255. Station no. 285. Large size, straw-yellow with brown hilum; seed coat slightly split.

95991. No. 8256. Station no. 286. Large size, straw-yellow with brown hilum; mottled and somewhat affected with purple spot.

95992. No. 8257. Station no. 287. Large size, straw-yellow with light-brown hilum; slightly mottled with brown.

95993. No. 8258. Station no. 288. Large size, straw-yellow with brown hilum; slightly wrinkled.

95994. No. 8259. Station no. 289. Large size, straw-yellow with brown hilum; mottled with brown.

95995. No. 8260. Station no. 290. Large size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly wrinkled.

95706 to 96383—Continued

95996. No. 8261. Station no. 291. Medium large, straw-yellow with light-brown hilum; seed coat more or less wrinkled and split.

95997. No. 8262. Station no. 292. Large size, straw-yellow with brown hilum; seed coat more or less wrinkled and split.

95998 and 95999. Medium large, straw-yellow with pale hilum; seed coat more or less wrinkled; slightly mottled with brown.

95998. No. 8263. Station no. 293.

95999. No. 8264. Station no. 294.

96000. No. 8265. Station no. 295. Large size, straw-yellow with light-brown hilum; seed coat wrinkled and slightly mottled with brown.

96001 to 96004. From the Kokaido Prefecture.

96001. No. 8266. Station no. 296. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96002 to 96004. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

96002. No. 8267. Station no. 297.

96003. No. 8268. Station no. 298.

96004. No. 8269. Station no. 299.

96005. No. 8270. Station no. 300. Medium size, straw-yellow with pale hilum; mottled with brown.

96006. No. 8271. Station no. 301. Medium size, straw-yellow with pale hilum; slightly mottled with brown and affected with purple spot.

96007. No. 8272. Station no. 302. Medium size, straw- to olive-yellow with pale hilum.

96008. No. 8273. Station no. 303. Medium size, straw-yellow with pale hilum.

96009. No. 8274. Station no. 304. Large size, straw-yellow with light-brown hilum; slightly wrinkled.

96010. No. 8275. Station no. 305. Medium large, straw-yellow with light-brown hilum; slightly mottled with brown.

96011. No. 8276. Station no. 306. Medium large, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly wrinkled.

96012. No. 8277. Station no. 307. Medium size, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96013. No. 8278. Station no. 308. Medium large, straw-yellow with light-brown hilum; heavily mottled with brown.

96014. No. 8279. Station no. 309. Medium size, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96015 and 96016. Medium large, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96015. No. 8280. Station no. 310.

96016. No. 8281. Station no. 311.

95706 to 96383—Continued

96017. No. 8282. Station no. 312. Medium large, straw-yellow with light-brown hilum; slightly mottled with brown.

96018. No. 8283. Station no. 313. Medium large, straw-yellow with light-brown hilum; seed coat slightly wrinkled and split.

96019. No. 8284. Station no. 314. Medium large, straw-yellow with brown hilum; seed coat slightly wrinkled.

96020. No. 8285. Station no. 315. Large size, straw-yellow with light-brown hilum; seed coat somewhat wrinkled and split.

96021. No. 8286. Station no. 316. Large size, straw-yellow with brown hilum; mottled with dark brown; seed coat wrinkled and split.

96022. No. 8287. Station no. 317. Large size, straw-yellow with brown hilum; slightly mottled with brown; seed coat badly wrinkled and split.

96023. No. 8288. Station no. 318. Large size, straw-yellow with light-brown hilum; seed coat wrinkled and split.

96024. No. 8289. Station no. 319. Large size, straw-yellow with brown hilum; heavily mottled with brown; seed coat badly wrinkled and split.

96025. No. 8290. Station no. 320. Large size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat wrinkled and split.

96026. No. 8291. Station no. 321. Medium size, straw-yellow with brown hilum; slightly mottled with brown; seed coat slightly wrinkled and split.

96027. No. 8292. Station no. 322. Medium size, straw-yellow with dark-brown hilum; mottled with dark brown.

96028. No. 8293. Station no. 323. Medium large, straw-yellow with brown hilum; slightly mottled with brown.

96029. No. 8294. Station no. 324. Medium size, straw-yellow with brown hilum; slightly mottled with brown; seed coat slightly wrinkled and split.

96030. No. 8295. Station no. 325. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96031 to 96034. Medium size, straw-yellow with brown hilum; mottled with brown.

96031. No. 8296. Station no. 326. Slightly mottled.

96032. No. 8297. Station no. 327.

96033. No. 8298. Station no. 328.

96034. No. 8299. Station no. 329.

96035. No. 8300. Station no. 330. Medium size, straw-yellow with dark-brown hilum.

96036. No. 8301. Station no. 331. Medium size, straw-yellow with brown hilum; mottled with brown.

96037. No. 8302. Station no. 332. Medium size, straw-yellow with brown hilum; mottled with brown; seed coat slightly wrinkled and split.

95706 to 96383—Continued

96038. No. 8303. Station no. 333. Medium large, straw-yellow with light-brown hilum; seed coat wrinkled and split.

96039. No. 8304. Station no. 334. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96040. No. 8305. Station no. 335. Large size, straw-yellow with light-brown hilum; slightly mottled with brown; slightly wrinkled.

96041. No. 8306. Station no. 336. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96042. No. 8307. Station no. 337. Medium size, straw-yellow with pale hilum.

96043. No. 8308. Station no. 338. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

96044. No. 8309. Station no. 339. Large size, straw-yellow with light-brown; seed coat wrinkled.

96045 to 96094. From the Heian-Nando Prefecture.

96045. No. 8310. Station no. 340. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96046. No. 8311. Station no. 341. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96047. No. 8312. Station no. 342. Medium size, straw-yellow with pale hilum; mottled with brown.

96048. No. 8313. Station no. 343. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96049. No. 8314. Station no. 344. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96050. No. 8315. Station no. 345. Medium size, straw-yellow with pale hilum.

96051. No. 8316. Station no. 346. Medium large, straw- to olive-yellow with pale hilum; slightly mottled with brown; seed coat slightly wrinkled and split.

96052. No. 8317. Station no. 347. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96053. No. 8318. Station no. 348. Medium size, straw-yellow with pale hilum.

96054. No. 8319. Station no. 349. Large size, straw-yellow with pale hilum; mottled with brown; seed coat wrinkled and split.

96055. No. 8320. Station no. 350. Large size, straw-yellow with light-brown hilum; slightly affected with purple spot; seed coat badly wrinkled and split.

96056. No. 8321. Station no. 351. Medium size, straw-yellow with pale hilum.

96057 and 96058. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96057. No. 8322. Station no. 352.

96058. No. 8323. Station no. 353.

95706 to 96383—Continued

96059. No. 8324. Station no. 354. Medium large, straw-yellow with pale hilum; slightly mottled with brown; slightly wrinkled and split.

96060. No. 8325. Station no. 355. Medium size, straw-yellow with light-brown hilum; badly wrinkled and split; slightly mottled with brown.

96061. No. 8326. Station no. 356. Large size, straw-yellow with light-brown hilum; slightly mottled with brown.

96062. No. 8327. Station no. 357. Large size, straw-yellow with light-brown hilum.

96063. No. 8328. Station no. 358. Medium large, straw-yellow with light-brown hilum; seed coat slightly wrinkled.

96064 and 96065. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96064. No. 8329. Station no. 359.

96065. No. 8330. Station no. 360.

96066. No. 8331. Station no. 361. Medium large, straw-yellow with brown hilum; slightly mottled with brown.

96067. No. 8332. Station no. 362. Large size, straw-yellow with brown hilum; slightly mottled with brown; slight purple spot; seed coat wrinkled and split.

96068. No. 8333. Station no. 363. Medium large, straw-yellow with pale hilum; mottled with brown; slightly wrinkled.

96069. No. 8334. Station no. 364. Large size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat wrinkled and split.

96070. No. 8335. Station no. 365. Medium large, straw-yellow with dark-brown hilum; heavily mottled with dark brown; seed coat badly split.

96071. No. 8336. Station no. 366. Medium size, straw-yellow with light-brown hilum.

96072. No. 8337. Station no. 367. Medium size, straw-yellow with pale hilum.

96073 and 96074. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96073. No. 8338. Station no. 368.

96074. No. 8339. Station no. 369.

96075. No. 8340. Station no. 370. Medium size, straw-yellow with light-brown hilum; mottled with brown.

96076. No. 8341. Station no. 371. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96077. No. 8342. Station no. 372. Medium size, straw-yellow with pale hilum; mottled with brown.

96078. No. 8343. Station no. 373. Medium size, straw-yellow with pale hilum; slightly mottled with brown; somewhat wrinkled.

96079. No. 8344. Station no. 374. Medium size, straw-yellow with pale hilum.

95706 to 96383—Continued

96080. No. 8345. Station no. 375. Medium size, straw-yellow with light-brown hilum; slightly wrinkled.

96081 to 96084. Medium sized, straw-yellow with pale hilum; slightly mottled with brown.

96081. No. 8346. Station no. 376.

96082. No. 8347. Station no. 377.

96083. No. 8348. Station no. 378.

96084. No. 8349. Station no. 379.

96085. No. 8350. Station no. 380. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown.

96086. No. 8351. Station no. 381. Medium size, straw-yellow with pale hilum; mottled with brown.

96087. No. 8352. Station no. 382. Medium size, straw-yellow with brown hilum; mottled with brown.

96088. No. 8353. Station no. 383. Medium size, straw-yellow with brown hilum; seed coat badly wrinkled and split.

96089. No. 8354. Station no. 384. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

96090. No. 8355. Station no. 385. Medium size, straw-yellow with pale hilum; slightly affected with purple spot.

96091. No. 8356. Station no. 386. Large, straw- to olive-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

96092. No. 8357. Station no. 387. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96093. No. 8358. Station no. 388. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown.

96094. No. 8359. Station no. 389. Medium large, straw-yellow with brown hilum; badly mottled with brown; seed coat split.

96095 to 96126. From the Heian-Hokudo Prefecture.

96095. No. 8360. Station no. 390. Medium size, straw-yellow with brown hilum; mottled with brown.

96096. No. 8361. Station no. 391. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96097. No. 8362. Station no. 392. Medium large, straw-yellow with light-brown hilum; mottled with brown; wrinkled and split.

96098. No. 8363. Station no. 393. Medium large, straw-yellow with pale hilum; wrinkled and split.

96099. No. 8364. Station no. 394. Medium large, straw-yellow with brown hilum; mottled with brown; seed coat wrinkled and split.

96100. No. 8365. Station no. 395. Medium size, straw-yellow with pale hilum; mottled with brown.

96101. No. 8366. Station no. 396. Medium size, straw-yellow with pale hilum; mottled with brown; seed coat wrinkled.

95706 to 96383—Continued

96102. No. 8367. Station no. 397. Medium size, straw-yellow with light-brown hilum; heavily mottled with dark brown.

96103. No. 8368. Station no. 398. Medium large, straw-yellow with light-brown hilum; mottled with brown; seed coat wrinkled and split.

96104. No. 8369. Station no. 399. Medium size, straw-yellow with pale hilum.

96105. No. 8370. Station no. 400. Medium size, straw-yellow with pale hilum; badly mottled with brown; seed coat somewhat split.

96106. No. 8371. Station no. 401. Medium size, straw-yellow with pale hilum.

96107. No. 8372. Station no. 402. Medium large, straw-yellow with dark-brown hilum; badly mottled with brown; seed coat split.

96108. No. 8373. Station no. 403. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96109. No. 8374. Station no. 404. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

96110. No. 8375. Station no. 405. Medium size, straw-yellow with pale hilum; mottled with brown.

96111. No. 8376. Station no. 406. Medium size, straw-yellow with brown hilum; mottled with brown; seed coat somewhat split.

96112. No. 8377. Station no. 407. Medium large, straw- to olive-yellow with light-brown hilum; mottled with brown; seed coat split.

96113. No. 8378. Station no. 408. Medium size, straw-yellow with brown hilum; mottled with brown and black.

96114. No. 8379. Station no. 409. Large size, straw-yellow with light-brown hilum; heavily mottled with brown; seed coat split.

96115. No. 8380. Station no. 410. Medium large, straw- to olive-yellow with light brown hilum; seed coat somewhat split.

96116. No. 8381. Station no. 411. Medium size, straw-yellow with pale hilum; heavily mottled with dark brown.

96117. No. 8382. Station no. 412. Medium size, light straw-yellow with pale hilum; seed coat somewhat wrinkled.

96118. No. 8383. Station no. 413. Medium size, straw-yellow with pale hilum.

96119. No. 8384. Station no. 414. Medium large, light straw-yellow with pale hilum.

96120. No. 8385. Station no. 415. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

96121. No. 8386. Station no. 416. Medium large, straw-yellow with pale hilum; slightly mottled with brown; seed coat split.

96122. No. 8387. Station no. 417. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

95706 to 96383—Continued

96123. No. 8388. Station no. 418. Large size, straw-yellow with pale hilum; slightly mottled with brown; seed coat split; affected with purple spot.

96124. No. 8389. Station no. 419. Medium large, straw-yellow with pale hilum; seed coat split.

96125. No. 8390. Station no. 420. Medium large, straw-yellow with pale hilum; seed coat split in fine network on sides.

96126. No. 8391. Station no. 421. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

96127 to 96156. From the Kankyo-Nando Prefecture.

96127. No. 8392. Station no. 422. Medium large, straw-yellow with pale hilum; heavily mottled with brown; seed coat wrinkled and split.

96128. No. 8393. Station no. 423. Medium large, straw-yellow with pale hilum; heavily mottled with brown; seed coat wrinkled and split.

96129 and 96130. Medium size, straw-yellow with pale hilum.

96129. No. 8394. Station no. 424.

96130. No. 8395. Station no. 425.

96131. No. 8396. Station no. 426. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

96132 to 96137. Straw-yellow with pale hilum; heavily mottled with brown.

96132. No. 8397. Station no. 427. Medium large, seed coat split.

96133. No. 8398. Station no. 428. Medium size, seed coat split.

96134. No. 8399. Station no. 429. Medium size.

96135. No. 8400. Station no. 430. Medium size, seed coat split.

96136. No. 8401. Station no. 431. Medium size.

96137. No. 8402. Station no. 432. Medium size.

96138. No. 8403. Station no. 433. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96139. No. 8404. Station no. 434. Medium size, straw- to olive-yellow with pale hilum; slightly mottled with brown.

96140. No. 8405. Station no. 435. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96141 and 96142. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

96141. No. 8406. Station no. 436.

96142. No. 8407. Station no. 437.

96143. No. 8408. Station no. 438. Medium large, straw-yellow with pale hilum; slightly mottled with brown.

96144 to 96146. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

96144. No. 8409. Station no. 439. Dark-brown mottling.

96145. No. 8410. Station no. 440. Seed coat split.

95706 to 96383—Continued

96146. No. 8411. Station no. 441.

96147. No. 8412. Station no. 442. Medium size, straw-yellow with brown hilum; heavily mottled with brown; seed coat split.

96148. No. 8413. Station no. 443. Medium large, straw-yellow with pale hilum; heavily mottled with brown; seed coat split.

96149. No. 8414. Station no. 444. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

96150. No. 8415. Station no. 445. Medium large, straw-yellow with pale hilum; mottled with brown; seed coat split.

96151. No. 8416. Station no. 446. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96152. No. 8417. Station no. 447. Medium size, straw-yellow with pale hilum; seed coat split.

96153. No. 8418. Station no. 448. Medium size, straw-yellow with pale hilum; seed coat slightly split.

96154. No. 8419. Station no. 449. Medium size, straw-yellow with pale hilum; heavily mottled with brown; seed coat badly split; some purple spot.

96155. No. 8420. Station no. 450. Olive-yellow with pale hilum; some mottling with brown; seed coat split.

96156. No. 8421. Station no. 451. Medium large, straw-yellow with brown hilum; slightly mottled with brown; seed coat split.

96157 to 96187. From the Kankyo-Hokudo Prefecture.

96157. No. 8422. Station no. 452. Medium size, straw-yellow with pale hilum; slightly mottled with brown; seed coat split.

96158. No. 8423. Station no. 453. Large size, straw-yellow with pale hilum; seed coat somewhat split.

96159. No. 8424. Station no. 454. Medium size, straw-yellow with brown hilum; heavily mottled with brown; some purple spot; seed coat split.

96160. No. 8425. Station no. 455. Medium large, straw-yellow with pale hilum; seed coat split into fine network on sides.

96161. No. 8426. Station no. 456. Medium size, straw-yellow with pale hilum; slightly mottled with brown; seed coat split.

96162 and 96163. Straw-yellow with light-brown hilum; slightly mottled with brown; affected with purple spot.

96162. No. 8427. Station no. 457. Medium large.

96163. No. 8428. Station no. 458. Medium size.

96164. No. 8429. Station no. 459. Medium size, straw-yellow with brown hilum; slightly mottled with brown; seed coat split.

96165 and 96166. Medium size, straw-yellow with pale hilum.

96165. No. 8430. Station no. 460.

95706 to 96383—Continued

96166. No. 8431. Station no. 461. Seed coat split.

96167 and 96168. Medium size, straw-yellow, heavily mottled with brown, seed coat split.

96167. No. 8432. Station no. 462. Brown hilum.

96168. No. 8433. Station no. 463. Pale hilum, seed coat split, some purple spot.

96169 and 96170. Medium size, straw-yellow with pale hilum.

96169. No. 8434. Station no. 464. Slightly mottled with brown.

96170. No. 8435. Station no. 465. Seed coat wrinkled and split.

96171. No. 8436. Station no. 466. Medium large, straw-yellow with pale hilum; slightly mottled with brown; seed coat badly split.

96172 to 96174. Large size, straw-yellow with pale hilum.

96172. No. 8437. Station no. 467. Seed coat badly split.

96173. No. 8438. Station no. 468. Seed coat split, some purple spot.

96174. No. 8439. Station no. 469. Slightly mottled with brown, seed coat badly split.

96175 to 96180. Medium size, straw-yellow with pale hilum.

96175. No. 8440. Station no. 470. Slightly mottled with brown, seed coat split.

96176. No. 8441. Station no. 471. Heavily mottled with brown, seed coat split.

96177. No. 8442. Station no. 472. Slightly mottled with brown, seed coat much split.

96178. No. 8443. Station no. 473. Slightly mottled with brown, seed coat slightly split.

96179. No. 8444. Station no. 474. Seed coat badly split.

96180. No. 8445. Station no. 475. Slightly mottled with dark brown.

96181. No. 8446. Station no. 476. Medium size, olive-yellow with pale hilum; heavily mottled with brown; some purple spot; seed coat split.

96182 to 96185. Medium size, olive-yellow with pale hilum.

96182. No. 8447. Station no. 477. Seed coat slightly split.

96183. No. 8448. Station no. 478. Mottled with brown.

96184. No. 8449. Station no. 479.

96185. No. 8450. Station no. 480. Heavily mottled with brown, seed coat split.

96186. No. 8451. Station no. 481. Medium large, straw-yellow with pale hilum; seed coat slightly split.

96187. No. 8452. Station no. 482. Medium size, straw-yellow with pale hilum; seed coat split.

96188 to 96202. From the Chinese Eastern Railway Agricultural Experiment Station, Echo, Manchuria.

95706 to 96383—Continued

96188 and 96189. Black with green germ.

96188. No. 8453. Station no. 483. Medium size.

96189. No. 8454. Station no. 484. Medium size.

96190. No. 8455. Station no. 485. Medium size, straw-yellow with dark-brown hilum.

96191 to 96193. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96191. No. 8456. Station no. 486.

96192. No. 8457. Station no. 487.

96193. No. 8458. Station no. 488. Seed coat split; purple spot.

96194. No. 8459. Station no. 489. Medium size, straw-yellow with black hilum and black markings about the seed scar.

96195 and 96196. Straw-yellow with slate black hilum.

96195. No. 8460. Station no. 490. Medium small.

96196. No. 8461. Station no. 491. Medium size.

96197. No. 8462. Station no. 492. Medium size, straw-yellow with black hilum; some purple spot.

96198. No. 8463. Station no. 493. Medium size, straw to olive-yellow with pale hilum; heavily mottled with dark brown.

96199. No. 8464. Station no. 494. Medium size, straw-yellow with brown hilum; heavily mottled with brown; some purple spot.

96200 and 96201. Medium small, straw-yellow with black hilum.

96200. No. 8465. Station no. 495. Some purple spot.

96201. No. 8466. Station no. 496.

96202. No. 8467. Station no. 497. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

96203 to 96383. From the Kankyo-Hokudo Prefecture.

96203 and 96204. Medium size, olive with black hilum; heavily mottled with black.

96203. No. 8468. Station no. 498.

96204. No. 8469. Station no. 499.

96205 and 96206. Medium large, olive with pale hilum; heavily mottled with black.

96205. No. 8470. Station no. 500. Seed coat somewhat wrinkled.

96206. No. 8471. Station no. 501.

96207. No. 8472. Station no. 502. Medium large, black with yellow germ; seed more or less flattened.

96208. No. 8473. Station no. 503. Medium size, olive with pale hilum; heavily mottled with black.

96209. No. 8474. Station no. 504. Medium size, bicolor (straw-yellow with black saddle).

96210 and 96211. Olive with pale hilum; heavily mottled with black.

95706 to 96383—Continued

96210. No. 8475. Station no. 505. Large size.

96211. No. 8476. Station no. 506. Medium size.

96212 to 96216. Medium size, olive with black hilum; heavily mottled with black.

96212. No. 8477. Station no. 507.

96213. No. 8478. Station no. 508.

96214. No. 8479. Station no. 509.

96215. No. 8480. Station no. 510.

96216. No. 8481. Station no. 511.

96217 to 96219. Medium size, black with yellow germ.

96217. No. 8482. Station no. 512.

96218. No. 8483. Station no. 513.

96219. No. 8484. Station no. 514.

96220 and 96221. Medium size, olive with black hilum; heavily mottled with black.

96220. No. 8485. Station no. 515.

96221. No. 8486. Station no. 516.

96222. No. 8487. Station no. 517. Medium size, black with yellow germ.

96223 to 96226. Medium size, olive, heavily mottled with black.

96223. No. 8488. Station no. 518.

96224. No. 8489. Station no. 519.

96225. No. 8490. Station no. 520.

96226. No. 8491. Station no. 521.

96227. No. 8492. Station no. 522. Large size, black and olive with yellow germ and seed coat more or less split.

96228 and 96229. Medium size, olive with black hilum; heavily mottled with black.

96228. No. 8493. Station no. 523.

96229. No. 8494. Station no. 524.

96230. No. 8495. Station no. 525. Medium size, olive, heavily mottled with black and brown.

96231. No. 8496. Station no. 526. Medium large, olive, with black and brown mottling.

96232 to 96234. Medium size, black and brown with black arranged in concentric rings. Slightly flattened.

96232. No. 8497. Station no. 527.

96233. No. 8498. Station no. 528.

96234. No. 8499. Station no. 529.

96235. No. 8500. Station no. 530. Medium size, black and brown.

96236 to 96242. Medium size, black and brown. Black concentric rings.

96236. No. 8501. Station no. 531.

96237. No. 8502. Station no. 532.

96238. No. 8503. Station no. 533.

96239. No. 8504. Station no. 534.

96240. No. 8505. Station no. 535.

96241. No. 8506. Station no. 536.

96242. No. 8507. Station no. 537.

95706 to 96383—Continued

96243. No. 8508. Station no. 538. Medium size, brown with brown hilum.

96244 to 96248. Brown and black. Black arranged in concentric rings.

96244. No. 8509. Station no. 539. Medium size.

96245. No. 8510. Station no. 540. Medium large.

96246. No. 8511. Station no. 541. Medium large.

96247. No. 8512. Station no. 542. Medium size.

96248. No. 8513. Station no. 543. Medium size.

96249. No. 8514. Station no. 544. Medium size, brown, slightly mottled with black.

96250. No. 8515. Station no. 545. Medium large, dark brown, slightly mottled with black.

96251 to 96256. Black and brown. Black arranged in concentric rings.

96251. No. 8516. Station no. 546. Medium size.

96252. No. 8517. Station no. 547. Medium small.

96253. No. 8518. Station no. 548. Medium size.

96254. No. 8519. Station no. 549. Medium size.

96255. No. 8520. Station no. 550. Medium size.

96256. No. 8521. Station no. 551. Medium small.

96257. No. 8522. Station no. 552. Medium size, straw-yellow with brown hilum; mottled with dark brown.

96258 and 96259. Medium size, straw-yellow; mottled with brown and black. Black in concentric rings.

96258. No. 8523. Station no. 553.

96259. No. 8524. Station no. 554.

96260. No. 8525. Station no. 555. Medium size, straw-yellow, mottled with brown and black.

96261. No. 8526. Station no. 556. Medium size, straw-yellow, heavily mottled with black and brown.

96262. No. 8527. Station no. 557. Medium large, straw-yellow with large patches of black about the hilum; seed coat split to a considerable extent.

96263. No. 8528. Station no. 558. Medium large, black with olive-yellow saddle; somewhat flattened.

96264. No. 8529. Station no. 559. Medium large, black with slight olive-yellow saddle; much flattened.

96265. No. 8530. Station no. 560. Medium size, black with olive saddle; slightly flattened.

96266 and 96267. Medium large, black with olive-yellow markings; slightly flattened.

96266. No. 8531. Station no. 561.

96267. No. 8532. Station no. 562.

96268. No. 8533. Station no. 563. Medium large, brown, slightly flattened.

95706 to 96383—Continued

96269. No. 8534. No. 564. Medium large, black with straw-yellow saddle; much flattened.

96270 to 96272. Large size, olive-yellow with black hilum; mottled with brown and black.

96270. No. 8535. Station no. 565.

96271. No. 8536. Station no. 566.

96272. No. 8537. Station no. 567.

96273 and 96274. Medium size, olive-yellow with black hilum.

96273. No. 8538. Station no. 568. Mottled with black.

96274. No. 8539. Station no. 569. Slightly mottled with black.

96275. No. 8540. Station no. 570. Medium large, olive with black hilum; slightly mottled with dark brown.

96276. No. 8541. Station no. 571. Medium small, olive-yellow with black hilum; heavily mottled with black.

96277. No. 8542. Station no. 572. Medium size, olive-yellow with brown hilum; mottled with brown.

96278. No. 8543. Station no. 573. Large size, olive-yellow with brown hilum; seed coat somewhat split.

96279 to 96281. Olive yellow with brown hilum; slightly mottled with brown.

96279. No. 8544. Station no. 574. Large size; hilum large.

96280. No. 8545. Station no. 575. Medium small.

96281. No. 8546. Station no. 576. Medium size.

96282. No. 8547. Station no. 577. Small size, olive-yellow with brown hilum; much flattened.

96283 to 96294. Olive-yellow with brown hilum; slightly mottled with brown.

96283. No. 8548. Station no. 578. Medium small.

96284. No. 8549. Station no. 579. Medium size.

96285. No. 8550. Station no. 580. Medium size, seed coat more or less split.

96286. No. 8551. Station no. 581. Medium small.

96287. No. 8552. Station no. 582. Medium small.

96288. No. 8553. Station no. 583. Medium size.

96289. No. 8554. Station no. 584. Medium size.

96290. No. 8555. Station no. 585. Medium size, seed coat more or less split.

96291. No. 8556. Station no. 586. Medium size.

96292. No. 8557. Station no. 587. Medium small.

96293. No. 8558. Station no. 588. Medium size.

96294. No. 8559. Station no. 589. Medium small.

96295. No. 8560. Station no. 590. Medium large, straw- to olive-yellow with brown hilum; slightly mottled with brown.

95706 to 96383—Continued

96296. No. 8561. Station no. 591. Medium size, straw-yellow with brown hilum; slightly mottled with brown; seed coat more or less split.

96297. No. 8562. Station no. 592. Medium size, straw- to olive-yellow with brown hilum.

96298 to 96300. Medium size, olive yellow with brown hilum; mottled with brown.

96298. No. 8563. Station no. 593.

96299. No. 8564. Station no. 594.

96300. No. 8565. Station no. 595.

96301. No. 8566. Station no. 596. Large size, olive-yellow with pale hilum; mottled with brown; seed coat slightly split.

96302. No. 8567. Station no. 597. Medium large, olive-yellow with pale hilum; mottled with brown.

96303. No. 8568. Station no. 598. Medium large, olive-yellow with pale hilum; mottled with brown and black.

96304. No. 8569. Station no. 599. Medium size, olive-yellow with pale hilum.

96305 and 96306. Medium size, straw- to olive-yellow with pale hilum; mottled with brown; seed coat more or less split.

96305. No. 8570. Station no. 600. Heavily mottled.

96306. No. 8571. Station no. 601. Slightly mottled.

96307 and 96308. Olive-yellow with pale hilum; mottled with brown.

96307. No. 8572. Station no. 602. Medium size, seed coat more or less split.

96308. No. 8573. Station no. 603. Medium large, slightly mottled.

96309. No. 8574. Station no. 604. Medium size, straw- to olive-yellow with pale hilum.

96310. No. 8575. Station no. 605. Medium size, straw- to olive-yellow; mottled with brown; seed coat more or less split.

96311. No. 8576. Station no. 606. Medium size, olive-yellow with pale hilum; heavily mottled with brown; seed coat more or less split.

96312 and 96313. Straw- to olive-yellow with pale hilum.

96312. No. 8577. Station no. 607. Medium large.

96313. No. 8578. Station no. 608. Medium size, mottled with brown.

96314. No. 8579. Station no. 609. Medium size, olive-yellow with pale hilum; mottled with dark brown.

96315. No. 8580. Station no. 610. Medium size, straw-yellow with pale hilum; mottled with brown.

96316. No. 8581. Station no. 611. Medium large, olive-yellow with pale hilum; slightly mottled with brown.

95706 to 96383—Continued

96317 and 96318. Medium size, olive-yellow with pale hilum; mottled with dark brown.

96317. No. 8582. Station no. 612.

96318. No. 8583. Station no. 613.

96319 and 96320. Olive-yellow with pale hilum; mottled with brown.

96319. No. 8584. Station no. 614. Medium size.

96320. No. 8585. Station no. 615. Medium small.

96321. No. 8586. Station no. 616. Medium size, straw- to olive-yellow with pale hilum; mottled with brown.

96322 and 96323. Black with green germ.

96322. No. 8587. Station no. 617. Medium small.

96323. No. 8588. Station no. 618. Medium size.

96324. No. 8589. Station no. 619. Medium size, green with pale hilum and green germ; mottled with brown; seed coat split.

96325 to 96328. Medium size, green with brown hilum and green germ; mottled with brown.

96325. No. 8590. Station no. 620. Seed coat split.

96326. No. 8591. Station no. 621.

96327. No. 8592. Station no. 622. Slightly flattened.

96328. No. 8593. Station no. 623.

96329. No. 8594. Station no. 624. Medium small, straw-yellow with pale hilum; heavily mottled with brown.

96330. No. 8595. Station no. 625. Medium size, green with pale hilum and green germ; slightly mottled with brown.

96331 and 96332. Medium size, green with brown hilum; slightly mottled with brown.

96331. No. 8596. Station no. 626.

96332. No. 8597. Station no. 627.

96333 and 96334. Medium size, green with pale hilum and green germ.

96333. No. 8598. Station no. 628.

96334. No. 8599. Station no. 629. Slightly mottled with brown, seed coat more or less split.

96335 to 96337. Black with yellow germ.

96335. No. 8600. Station no. 630. Medium size.

96336. No. 8601. Station no. 631. Medium small, slightly flattened.

96337. No. 8602. Station no. 632. Medium size, slightly flattened.

96338. No. 8603. Station no. 633. Medium size, straw- to olive-yellow with pale hilum; slightly mottled with brown.

96339 to 96350. Black with yellow germ.

96339. No. 8604. Station no. 634. Medium size, slightly flattened.

95706 to 96383—Continued

96340. No. 8605. Station no. 635. Medium small.

96341. No. 8606. Station no. 636. Medium small.

96342. No. 8607. Station no. 637. Medium size, slightly flattened.

96343. No. 8608. Station no. 638. Very small, nearly round.

96344. No. 8609. Station no. 639. Small.

96345. No. 8610. Station no. 640. Medium size, slightly flattened.

96346. No. 8611. Station no. 641. Medium size.

96347. No. 8612. Station no. 642. Small, slightly flattened.

96348. No. 8613. Station no. 643. Medium small.

96349. No. 8614. Station no. 644. Small.

96350. No. 8615. Station no. 645. Medium size, slightly flattened.

96351. No. 8616. Station no. 646. Medium size, green with brown hilum and green germ.

96352. No. 8617. Station no. 647. Medium small, black with yellow germ; slightly flattened.

96353 to 96356. Medium size, black with yellow germ.

96353. No. 8618. Station no. 648. Slightly flattened.

96354. No. 8619. Station no. 649. Much flattened.

96355. No. 8620. Station no. 650. Slightly flattened.

96356. No. 8621. Station no. 651.

96357. No. 8622. Station no. 652. Medium size, reddish brown.

96358. No. 8623. Station no. 653. Medium size, brown.

96359. No. 8624. Station no. 654. Medium large, straw-yellow with pale hilum; heavily mottled with brown.

96360. No. 8625. Station no. 655. Medium large, olive-yellow with pale hilum; heavily mottled with brown.

96361. No. 8626. Station no. 656. Medium large, black with yellow germ.

96362 to 96364. Medium size, olive-yellow with brown hilum; mottled with brown.

96362. No. 8627. Station no. 657.

96363. No. 8628. Station no. 658.

96364. No. 8629. Station no. 659.

96365. No. 8630. Station no. 660. Medium large, black with yellow germ.

96366. No. 8631. Station no. 661. Medium size, olive-yellow with brown hilum; slightly mottled with brown.

96367. No. 8632. Station no. 662. Medium size, straw- to olive-yellow with brown hilum; slightly mottled with brown.

96368. No. 8633. Station no. 663. Medium small, straw-yellow with brown hilum.

95706 to 96383—Continued

96369. No. 8634. Station no. 664. Medium size, olive-yellow with pale hilum.

96370 and 96371. Medium size, straw- to olive-yellow with pale hilum; slightly mottled with brown.

96370. No. 8635. Station no. 665.

96371. No. 8636. Station no. 666.

96372. No. 8637. Station no. 667. Medium large, brown and black.

96373. No. 8638. Station no. 668. Medium size, straw-yellow with black hilum; heavily mottled with brown.

96374 and 96375. Medium size, straw-yellow with brown hilum.

96374. No. 8639. Station no. 669.

96375. No. 8640. Station no. 670. Nearly round.

96376. No. 8641. Station no. 671. Medium size, light straw-yellow with dark-brown hilum; seed coat badly split.

96377. No. 8642. Station no. 672. Medium size, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96378. No. 8643. Station no. 673. Medium small, straw-yellow with very dark-brown hilum; mottled with brown.

96379 to 96381. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

96379. No. 8644. Station no. 674.

96380. No. 8645. Station no. 675.

96381. No. 8646. Station no. 676.

96382 and 96383. Straw-yellow with brown hilum; very heavily mottled with dark brown.

96382. No. 8647. Station no. 677.

96383. No. 8648. Station no. 678.

96384 to 96389.

From India. Seeds presented by W. O'Brien, Hyderabad, Deccan. Received January 28, 1932.

96384. ANNONA SQUAMOSA L. Annonaceae. **Sugar-apple.**

Sitapal. A wild form of the sugar-apple found on trap formation at Hyderabad, Deccan. The fruiting season is two months, from October to December, in India.

96385. BRASSICA OLERACEA BOTRYTIS L. Brassicaceae. **Cauliflower.**

A form acclimatized at Darjeeling Hills which grows better than English seed from the plains.

96386. CARICA CANDAMARCENSIS Hook. f. Papayaceae.

Hill papaw. Collected on the Nilgiri Hills, southern India, between 6,000 and 7,000 feet altitude.

For previous introduction see 66651.

96387. CARICA PAPAYA L. Papayaceae. **Papaya.**

Mixed varieties.

96384 to 96389—Continued

96388. BASELLA RUBRA L. Basellaceae.

Malabar nightshade. A succulent herbaceous freely branched climber, native to Bengal, and cultivated throughout India. The juice of the leaves is used in native medicine for catarrhal affections, and the leaves and stems are used as a potherb as we use spinach.

For previous introduction see 74555.

96389. SOLANUM MELONGENA L. Solanaceae. **Eggplant.**

A large round green eggplant whose fruits weighed up to 4 pounds.

96390 to 96420. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Scions obtained by R. Kent Beattie, Bureau of Plant Industry. Received February and March 1928. Numbered in January 1932.

96390 to 96404. Varieties cultivated in the Experiment Station at Ayabe, Kyoto Fu, January 26, 1928.

96390. Nos. 418 and 419. *Sho-gwatsu.* Nuts ripen early in October; not considered a good variety.

96391. Nos. 422 and 423. *Shimokatsugi* (small). Nuts ripen after the middle of October; a very good quality.

96392. Nos. 428 and 429. *Chokoji.* Nuts ripen about the middle of October; a good quality.

96393. Nos. 432 and 433. *Nishigaki.* Nuts ripen the end of October; not a very good variety.

96394. Nos. 452 and 453. *Yoro.* Nuts ripen late in October; a medium good variety.

96395. Nos. 454 and 455. *Futakura.* Nuts ripen the middle of October; a medium good variety.

96396. Nos. 456 and 457. *Kenaga.* Nuts ripen before the middle of October; very good variety, one of the best.

96397. Nos. 458 and 459. *Honjo.* Nuts ripen the first of October; one of the very best varieties.

96398. Nos. 460 and 461. *Wazo.* Nuts ripen after the middle of October; a very good variety.

96399. Nos. 466 and 467. *Obata.* Nuts ripen the first of October; a poor variety.

96400. Nos. 468 and 469. *Heiwa.* Nuts ripen the first of October; quite a good variety.

96401. Nos. 472 and 473. *Gokuwase.* Nuts ripen the middle of September; a good variety.

96402. Nos. 486 and 487. *Sobadane.* Nuts ripen toward the end of September; not a very good variety.

96403. Nos. 488 and 489. *Kamadanwase.* Nuts ripen the middle of September; not a good variety.

96404. Nos. 490 and 491. *Kamadaniokute.* Nuts ripen after the middle of October; quality undeterminable.

96390 to 96420—Continued

96405. No. 613. *Shibaguri.* Collected February 5, 1928, by Kurihara at Shizuoka Ken, Tagato Gun, Kitakano Mura, Kashiwakubo. A wild tree about 20 feet high and about 20 inches in diameter.

96406 to 96414. Cultivated varieties obtained at the Okitsu Agricultural Experiment Station, February 6, 1932.

96406. No. 616. *Togenashi.* Nuts ripen the first half of October. Fruit spineless.

96407. No. 618. *Yashima.* Nuts ripen the middle of October.

96408. No. 622. *Kasaharawase.*

96409. No. 623. *Tanabata.* Nuts ripen the latter half of August.

96410. No. 629. *Ogawanigo.* Tree has not fruited at the experiment station.

96411. No. 633. *Shidare* (weeping). Originally from Nagano Ken.

96412. No. 634. *Taishowase.* Nuts ripen late in August or early in September.

96413. No. 639. *Ashigarawase.* Nuts ripen early in September.

96414. No. 643. *Katayama.* Nuts ripen the latter part of October.

96415. No. 667. *Genko.* Collected February 23, 1928, at Kasagi, Kyoto Fu, in the orchard of Mr. Kita, from an orchard where 8,000 chestnut trees were planted and in two years all but 100 died. This tree has no Endothia on it and may be resistant. *Genko* is a renaming of the variety *O-Tamba,* which means almost any large chestnut from Tamba.

96416. No. 670. *Kumageguri.* Collected from a nearby nursery February 24, 1928 and sent in by Hainichi Kudo, of the Tomoni Experiment Station, Yamaguehi Ken.

96417. No. 671. *Kasaharawase.* From the Gifu Ken Agricultural Experiment Station, February 26, 1928.

96418 to 96420. Cultivated varieties sent in February 1928 by Shigewa Hayashi, Yamaguchi Ken, Kuga Gun, Sakuwe Mura.

96418. No. 672. *Higan.*

96419. No. 673. *Toyotama.*

96420. No. 674. *Kambei.*

96421. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Syria. Seeds presented by Movses N. Demirjian, Aleppo. Received January 29, 1932.

Native-grown nuts of first quality.

96422 to 96472.

From Morocco. Plants and cuttings presented by H. Brayard, director, Station Expérimentale, Marrakech. Received January 29, 1932.

96422 to 96438. AMYGDALUS spp. Amygdalaceae.

96422 to 96430. AMYGDALUS COMMUNIS L. (*Prunus amygdalus* Stokes). **Almond.**

96422 to 96472—Continued

96422. *Aboid.* From Tunisia.

96423. *Constantini.* From Tunisia.

96424. *Moshevonne.*

96425. *Tournefort.* From France.

96426. *Zaaf.* From Tunisia.

96427. *F. 1.*

96428. *F. 2.*

96429. *L'.*

96430. *L. L.*

96431 to 96438. AMYGDALUS PERSICA L. (*Prunus persica* Stokes). **Peach.**

Originally from Spain.

96431. *Amarilla de calenda.*

96432. *Bienvenido.*

96433. *Campiel amarillo.*

96434. *De Calente.*

96435. *De Sartaga.*

96436. *Reus.*

96437. *Roja de Segorbino.*

96438. *Selecta del Pringe del Junio.*

96439. FICUS CARICA L. Moraceae. **Common fig.**

Lerida fraga. Originally from Spain.

96440 to 96443. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

96440. *De la Rosa.* From Spain.

96441. *Douce de Sfax.* From Tunisia.

96442. *Fornorino.* From Tunisia.

96443. *Meski.* From Tunisia.

96444. OLEA EUROPAEA L. Oleaceae. **Common olive.**

Gordal. Cuttings of plants originally from Spain.

96445 to 96455. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Nos. 96445 to 96448 were originally from Spain.

96445. *Bullida.*

96446. *Canino.*

96447. *Carnelos.*

96448. *De Anton.*

96449. *De Portugal.* From Portugal.

Nos. 96450 to 96455 were originally from Spain.

96450. *Galta Rocha.*

96451. *Gilctan.*

96452. *Patisarca.*

96453. *Primerizo.*

96454. *Real fino.*

96455. *Rouge Hatif.*

96456 to 96459. PRUNUS spp. Amygdalaceae. **Plum.**

96456. PRUNUS sp.

Akubotankio. From Japan.

96457. PRUNUS sp.

De San Juan. From Spain.

96422 to 96472—Continued

96458. PRUNUS sp.

Reine Claude de Corse. From Corsica.

96459. PRUNUS sp.

A native wild plum.

96460. PUNICA GRANATUM L. Punicaceae. **Pomegranate.**

Raaf Raff.

96461. PYRUS LONGIPES Coss. and Dur. Malaceae. **Pear.**

A native wild pear.

96462. PYRUS sp. Malaceae. **Pear.**

Carnera fina. From Spain.

96463 to 96472. VITIS VINIFERA L. Vitaceae. **European grape.**

96463. *Abbo.*

96464. *Adari.*

96465. *Asseghin.*

96466. *Bou Saah.*

96467. *El Gouz.*

96468. *Feriana.*

96469. *Geir.*

96470. *Kemish ali blanc.* From Algeria.

96471. *Kind Djemal.*

96472. *Ain-el-Aija.*

96473 and 96474. SACCHARUM OFFICINARUM L. Poaceae. **Sugarcane.**

From Ile de la Réunion. Cuttings presented by Prof. A. Kopp, director, Station Agronomique, St. Denis. Received January 20, 1932.

96473. *Naz.*

96474. *Uba Marot.*

96475. MALPIGHIA GLABRA L. Malpighiaceae. **Barbados-cherry.**

From Texas. Plants presented by A. T. Potts, president, Baker-Potts Nursery Co., Harlingen. Received February 4, 1932.

A tropical American shrub up to 6 feet high with slender branches and ovate to elliptic entire leaves. The rose-red flowers, nearly an inch across, have fringed petals and are borne in umbels of 3 to 5. The acid scarlet berries, the size of cherries, are used for jams and preserves.

For previous introduction see 95087.

96476 and 96477.

From China. Seeds presented by G. Weidman Groff, Lingnan University, Canton. Received February 1, 1932.

96476. CITRUS sp. Rutaceae.

No. 31. A wild fruit collected in the eastern Haugheng district, South Kwangtung.

96477. SEVERINIA BUXIFOLIA (Poir.) Ten. (*Atalantia buxifolia* Oliver). Rutaceae.

No. 19. A subtropical thorny shrub resistant to alkali and salt. It has shiny green leaves, clusters of small white flowers, and dark-red berrylike fruits.

For previous introduction see 75969.

96478. CAPPARIS FLEXUOSA L. Capparidaceae.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 2, 1932.

No. 2607. Collected on Beata Island, Dominican Republic, January 18, 1932. A scandent shrub with long pods which open gradually and expose the bright red inside. The seeds are covered with a white coating of soft glistening material which remains moist. Found on dry limestone rocks.

For previous introduction see 90902.

96479. PHASEOLUS CALCARATUS Roxb. Fabaceae. **Rice bean.**

From Cuba. Seeds presented by Ing. Antonio Portuondo, director, Estacion Experimental Agronomica, Santiago de las Vagas, Province de la Habana. Received February 2, 1932.

Frijol Mambi. An introduced bean which has become spontaneous in some Provinces of Cuba; it is used both as food for men and cattle and as a cover crop.

96480 and 96481.

From Arizona. Seeds presented by F. J. Crider, Boyce Thompson Southwestern Arboretum, Superior. Received February 3, 1932.

96480. YUCCA ELATA Engelm. Liliaceae.

A very striking arborescent yucca, the larger trees reaching a height of 16 to 23 feet, simple or with a few short branches at the top. The long pallid leaves are white-margined, rigidly divergent, and reach a maximum width of half an inch; they are soon finely and copiously filiferous. The white bell-shaped flowers with lanceolate petals are in a large panicle on a long exserted peduncle, often twice the length of the rest of the plant. The capsule is stout oblong and usually symmetrical, very smooth, and of a clear straw color at maturity; the seeds are exceptionally large and some are nearly half an inch long.

For previous introduction see 48150.

96481. YUCCA MACROCARPA Engelm. Liliaceae.

An arborescent plant 10 to 15 feet high sometimes branched above, native to Arizona. The smooth rigidly divergent blue-green leaves, 1 to 3 inches wide, are sparingly filiferous along the margins, and the white flowers are borne in dense tomentose panicles close to the leaves.

96482 to 96491. Phoenicaceae. **Palm.**

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 2, 1932.

96482 and 96483. COCCOTHRINAX sp.

A very handsome slender fan palm with a trunk about 20 feet high and about 3 inches in diameter. The under side of the leaves is silvery and the fruit is dark purple. Found on sand dunes near the seacoast.

96482. No. 2597. Collected January 1, 1932 on Great Inagua Isle, Bahamas.

96482 to 96491—Continued

96483. No. 2614. Collected January 17, 1932 on the island of Beata, Dominican Republic.

96484. LINOMA ALBA (Bory) O. F. Cook.

No. 2637. Collected January 23, 1932, in the public square at Basseterre, St. Kitts. A form of this well-known areca-like palm with yellow or orange petioles and veins on the leaves of the young plants. It reaches a height of about 30 feet, and the pinnate leaves are 4 to 8 feet long. It is native to tropical Asia.

For previous introduction see 93407.

96485. ELAEIS GUINEENSIS Jacq. **African oil palm.**

No. 2575. Collected January 9, 1932, at Nassau, New Providence, Bahamas, in the garden of Mrs. Edward George. A tall and evidently a very old tree, but still bearing fruit.

96486. LIVISTONA CHINENSIS (Jacq.) R. Br. **Chinese fan palm.**

No. 2555. Collected January 1, 1932, on New Providence. A palm, native to China, with a short thick trunk up to 6 feet high and 1 foot thick, having a crown of reniform palmately divided leaves 4 to 6 feet across on petioles about 5 feet long, which are armed below the middle with recurved brown spines more than an inch long.

For previous introduction see 93412.

96487. PSEUDOPHOENIX SAONAE O. F. Cook.

Nos. 2619 and 2620. Collected January 20, 1932, on Saona Island off the southeast coast of Dominican Republic. A tall palm over 25 feet high with gray-green leaves and great bunches of brilliant scarlet fruits. It suggests in habit a small Royal palm.

96488. PSEUDOPHOENIX SARGENTI Wendl.

No. 2585. The so-called *Hog cabbage* palm, collected January 10, 1932, in Nassau, New Providence, in the garden of Mrs. Edward George. A palm which is wild on Harbour Island and on several of the Bahama Keys, where it grows well in the rocky limestone formation of the islands.

96489. INODES CAUSIARUM O. F. Cook.

No. 2621. Collected January 20, 1932, on Saona Island, near the beach. A palm 35 feet high with the trunk 18 inches in diameter; the fan-shaped leaves are 12 feet long and 6 feet across. This species of palm has proved hardy at Gainesville, Fla., and deserves a wide distribution because of its striking beauty when young as well as when old.

96490. SEAFORTHIA ELEGANS R. Br.

No. 2589. Collected January 10, 1932, in Nassau, New Providence, in the garden of Mrs. Edward George. A palm up to 30 feet in height, native to the southern coast of Australia and the neighboring islands. The dark-green pinnate fronds are 15 feet long, and the small fruits are oval and very fibrous.

For previous introduction see 93410.

96491. THRINAX sp.

No. 2636. Collected January 24, 1932 in the public square at Basseterre, St. Kitts. A handsome palm 15 feet high, with large drooping fan-shaped leaves and beautiful snow-white fruits borne on

96482 to 96491—Continued

long inflorescences that project beyond the leaves, giving the palm a very showy appearance.

96492 to 96499.

From India. Seeds presented by W. O'Brien, Hyderabad, Deccan. Received February 6, 1932.

96492 and 96493. CAPSICUM ANNUUM L. Solanaceae. **Common redpepper.**

Goa chillie. Peppers which are not pungent and which under suitable cultivation attain a length of 6 or 7 inches. Acclimated to India, but said to have originated in some Portuguese possession in South America or Central America.

96492. *Chilli Larji Mukhi,* facing the sun.

96493. *Hot Indian.*

96494. CARICA PAPAYA L. Papayaceae. **Papaya.**

96495 to 96497. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

96495. *Arracai Travelle.*

96496. *Loaland.*

96497. *Rays Kushi Rives.*

96498 and 96499. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

96498. *Rays Lucknow.*

96499. *Surdah Kabul.*

96500 to 96518.

From the West Indies. Material collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 2, 1932.

96500. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

No. 2638. Variety *Ripley.* Plants presented by Mr. Kelsick, superintendent, Agricultural Experiment Station at Basseterre, St. Kitts, January 23, 1932. A large-fruited, golden-yellow pineapple of delicious flavor and texture, but not resistant to the pineapple wilt. A fine variety for domestic consumption, but not for shipping.

96501. ASPARAGUS sp. Convallariaceae.

No. 2574. Collected January 9, 1932, at Nassau, New Providence, in the garden of Mrs. Edward George. A climbing species with delicate pink or lavender and white blooms.

96502. BUCIDA BUCERAS L. Combretaceae.

No. 2601. Collected on Inagua, Bahamas, January 15, 1932. A so-called oak with leaves 3 inches long and 2 inches wide. A tree up to 75 feet high with a diameter of 3 to 4 feet and having spatulate leaves clustered at the ends of the branches. The spikes of inconspicuous flowers are followed by small slightly fleshy drupes about a quarter of an inch long. It is native to the West Indies and tropical America.

96503. CAPSICUM FRUTESCENS L. Solanaceae. **Bush redpepper.**

No. 2584. Collected January 10, 1932, at Nassau, New Providence. A salmon-

96500 to 86518—Continued

pink pepper that looks like a cross between the yellow Haitian variety and a deep red variety. For trial in comparison with the Haitian variety.

96504. CARICA PAPAYA L. Papayaceae. **Papaya.**

No. 2582. Collected at Nassau, New Providence, January 12, 1932. A round small-fruited variety of excellent flavor, very sweet, and without the unpleasant smell which is characteristic of many papayas.

96505. CURCUMA LONGA L. Zinziberaceae. **Turmeric.**

No. 2641. Tubers from the market at Basseterre, St. Kitts, January 23, 1932.

96506. DIOSCOREA TRIFIDA L. f. Dioscoreaceae. **Yampi.**

No. 2631. Tubers collected in the Basseterre market, St. Kitts, January 23, 1932. A very small tuber-producing species with thin skins and, when baked, of a mealy consistency.

96507. HELICTERES JAMAICENSIS Jacq. Sterculiaceae.

No. 2600. Collected on Salt Pond Hill, Great Inagua, Bahamas, January 15, 1932. A shrub or small tree up to 25 feet high, native to the West Indies. The cordate leaves, 2 to 6 inches long, are covered with stellate hairs. The white flowers, 2 to 3 inches across, are borne in few-flowered clusters and are followed by spirally twisted pods 1 to 2 inches long.

96508. EXOGONIUM ERIOSPERMUM (Desr.) Choisy. Convolvulaceae. **Morning-glory.**

No. 2611. Collected January 18, 1932, on rocky cliffs at Beata Island, Dominican Republic. Tubers of a beautiful free-flowering twining morning-glory with very attractive purple-pink or magenta-pink flowers in great masses.

96509. JACARANDA CAERULEA (L.) Griseb. Bignoniaceae.

No. 2561. Collected at Nassau, New Providence. A tree, native to the West Indies with bipinnate leaves made up of 4 to 8 branches each bearing 8 to 16 pairs of obliquely oblong leaflets 1 inch long. The glabrous blue flowers, 1 to 2 inches long, are borne in lax panicles.

96510. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 2591. The *Gem*. Collected at Gun Point, Eleuthera Island, Bahamas, January 11, 1932. A small, deep-red tomato 1½ inches in diameter and of good flavor. It is much esteemed, as it ripens early and lasts until late in the season.

96511. MARCGRAVIA UMBELLATA L. Marcgraviaceae.

No. 2639. Collected on Mount Misery, St. Kitts, at 1,700 feet altitude, January 24 1932. A climbing epiphytic shrub with creeping and rooting sterile branches bearing nearly sessile cordate leaves. The flowering branches bear oblong to linear leaves and umbels of greenish flowers said to be fertilized by birds.

96512. CONSOLEA MONILIFORMIS (L.) Britton (*Opuntia moniliformis* Haw.). Cactaceae.

96500 to 86518—Continued

No. 2604. Seeds and plants collected on dry rocky formation on Beata Island, January 17, 1932. A striking and really beautiful tree with the trunk covered with spines sometimes 8 inches long. The red flowers are small and not very showy, but the surfaces of the fruits are aerolated, giving them an attractive appearance.

96513. ORMOSIA sp. Fabaceae.

No. 2632. Collected January 24, 1932, at 1,400 feet altitude on Mount Misery, St. Kitts. A tall handsome forest tree with very showy red and black seeds.

96514. PLUMERIA BARAHONENSIS Urban. Apocynaceae. **Frangipani.**

No. 2608. Collected January 18, 1932, on Beata Island. A very variable species of frangipani found growing on the cliffs in calcareous rock formation; some of the trees were 30 feet high and a foot in diameter. The white flowers, an inch across, are in clusters and very fragrant.

96515. PLUMERIA sp. Apocynaceae.

No. 2602. From Great Inagua, Bahamas, January 15, 1932. A dwarf species, up to 15 feet high, with small fragrant flowers and small seed pods. May prove of value as a dooryard tree.

96516. PROSOPIS CHILENSIS (Molina) Stuntz (*P. juliflora* DC.). Mimosaceae. **Algaroba.**

No. 2598. Collected January 15, 1932, near Mathewstown, Great Inagua, Bahamas. Seeds from a handsome old tree growing on the shore.

For previous introduction see 80771.

96517. STYLOSANTHES HAMATA (L.) Taub. Fabaceae.

No. 2599. Collected January 15, 1932, on Salt Pond Hill, Great Inagua. A woody perennial, 1 to 2 feet high, native to the West Indies and tropical America. The trifoliolate leaves have prominently veined linear-elliptic leaflets about 1 inch long, and the small yellow flowers are borne in short dense spikes. It is of possible value as a cover crop.

96518. VITEX AGNUS-CASTUS L. Verbenaceae. **Lilac chaste-tree.**

No. 2573. Collected January 9, 1932, at Nassau, New Providence, in the garden of Mrs. Edward George. A large tree with very aromatic foliage and delicate lavender flowers.

96519 to 96527.

From Japan. Seeds purchased from the Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. Received February 3, 1932.

96519. ACER RUFINERVE Sieb. and Zucc. **Maple.**

A small deciduous Japanese maple with small bluish-white young shoots and dark green irregularly serrate 3-lobed or obscurely 5-lobed leaves. The flowers are in erect racemes about 3 inches long, and the keys are up to three fourths of an inch long. Occasionally the young foliage, the leafstalks, and the midribs are red.

For previous introduction see 91522.

96520. ACER TEGMENTOSUM Maxim. Aceraceae. **Maple.**

96519 to 96527—Continued

A tree with 3- to 5-lobed cordate serrulate leaves 2 to 6 inches long, native to Manchuria and Chosen. The small flowers are in slender pendulous racemes 3 to 4 inches long and are followed by winged fruits which spread almost horizontally.

For previous introduction see 90654.

96521. DAPHNIPHYLLUM GLAUCESCENS Blume. Euphorbiaceae.

An East Indian tree with entire oblong-lanceolate leaves, inconspicuous flowers, and fleshy drupes.

96522. DAPHNIPHYLLUM MACROPODUM Miquel. Euphorbiaceae.

An evergreen shrub with elliptic-oblong, dark-green leathery leaves 5 to 8 inches long, inconspicuous flowers, and small ellipsoidal fruits in axillary racemes 3 inches long. Native to eastern Asia.

96523. IRIS MINUTA Franch. and Sav. Iridaceae.

A curious little yellow-flowered beardless iris, apparently only known as a cultivated plant in Japan, but said to grow wild in Chosen (Korea). The flowers, which appear in April or May, have short, pale-yellow standards, and the rounded falls are marked with brown. The leaves are short at flowering time, but eventually reach a height of about 12 inches.

96524. LEUCOTHOË KEISKEI Miquel. Ericaceae.

A slender spreading evergreen Japanese shrub with ovate-oblong remotely crenate-serrate leaves 1 to 3 inches long and axillary and terminal racemes of large white cylindrical flowers closely resembling the American *L. racemosa.*

96525 to 96527. RHODODENDRON spp. Ericaceae.

96525. RHODODENDRON RETICULATUM D. Don. (*R. dilatatum* Miquel).

A much-branched deciduous Japanese shrub up to 25 feet high belonging to the section Sciadorhodion. The branchlets are yellow brown; the reticulate broadly ovate leaves, 2 to 3 inches long, are in clusters of 2 to 3, and the slightly 2-lipped, rotate-campanulate flowers are rose purple to magenta. There are two forms—the ordinary form with 10 stamens, often called *R. rhombicum,* and a form with 5 stamens called *R. dilatatum.*

For previous introduction see 95542.

96526. RHODODENDRON sp.

96527. RHODODENDRON sp.

96528 and 96529.

From England. Plants purchased from V. N. Gauntlett & Co., Ltd., Japanese Nurseries, Chiddingfold, Surrey. Received February 8, 1932.

96528. LONICERA CHAETOCARPA Rehder. Caprifoliaceae. **Honeysuckle.**

An upright shrub about 6 feet high, native to western China, with oblong leaves, nodding yellowish flowers, and red fruits.

For previous introduction see 76582.

96528 and 96529—Continued

96529. LONICERA PYRENAICA L. Caprifoliaceae. **Pyrenees honeysuckle.**

A small upright shrub 3 to 4 feet high, native to southern Europe. The leaves are ovate to oblong, blue-green above and whitish below, and the nodding flowers, on slender stalks, are pinkish white and nearly an inch long. The subglobose berries are red.

96530 to 97251. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Chosen. Seeds arranged for by the Dorsett and Morse expedition and sent through the American consulate at Tokyo, Japan. Received February 6, 1932.

A collection of soybeans presented by the Seisen Shijo (western branch) of the Agricultural Experiment Station of the Chosen Government, Shariin, October 24, 1931.

Notes by W. J. Morse.

96530 and 96531. Medium size, straw-yellow with brown hilum.

96530. No. 8649. Station no. 679.

96531. No. 8650. Station no. 680. Little purple spot.

96532. No. 8651. Station no. 681. Medium large, straw-yellow with dark-brown hilum; slightly mottled with brown.

96533. No. 8652. Station no. 682. Medium small, straw- to olive-yellow with brown hilum; mottled with dark brown.

96534. No. 8653. Station no. 683. Medium small, straw-yellow with brown hilum; heavily mottled with dark brown.

96535. No. 8654. Station no. 684. Medium size, straw-yellow with light-brown hilum.

96536 and 96537. Medium size, straw-yellow with brown hilum.

96536. No. 8655. Station no. 685. Mottled with brown.

96537. No. 8656. Station no. 686. Slightly flattened.

96538. No. 8657. Station no. 687. Medium size, straw-yellow with a light-brown hilum.

96539. No. 8658. Station no. 688. Medium-size, straw-yellow with pale hilum; heavily mottled with brown.

96540. No. 8659. Station no. 689. Medium size, straw-yellow with pale hilum; heavily mottled with brown; more or less purple spot.

96541. No. 8660. Station no. 690. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

96542. No. 8661. Station no. 691. Medium small, straw-yellow with brown hilum.

96543 and 96544. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96543. No. 8662. Station no. 692.

96544. No. 8663. Station no. 693.

96530 to 97251—Continued

96545 and 96546. Medium size, straw-yellow with pale hilum; mottled with brown.

96545. No. 8664. Station no. 694.

96546. No. 8665. Station no. 695. Slightly mottled.

96547. No. 8666. Station no. 696. Medium large, straw-yellow nearly round with a pale hilum; seed coat slightly split; some purple spot.

96548. No. 8667. Station no. 697. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

96549 to 96552. Medium size, straw-yellow with pale hilum.

96549. No. 8668. Station no. 698. Mottled with brown.

96550. No. 8669. Station no. 699. Mottled with brown.

96551. No. 8670. Station no. 700.

96552. No. 8671. Station no. 701. Slightly mottled with brown.

96553. No. 8672. Station no. 702. Medium size, straw-yellow with black hilum; heavily mottled with black.

96554. No. 8673. Station no. 703. Medium size, black with yellow germ.

96555 to 96560. Medium size, brown with green germ.

96555. No. 8674. Station no. 704.

96556. No. 8675. Station no. 705.

96557. No. 8676. Station no. 706.

96558. No. 8677. Station no. 707.

96559. No. 8678. Station no. 708.

96560. No. 8679. Station no. 709.

96561 to 96564. Medium size, green with slate-black hilum and green germ.

96561. No. 8680. Station no. 710.

96562. No. 8681. Station no. 711.

96563. No. 8682. Station no. 712.

96564. No. 8683. Station no. 713.

96565 to 96573. Green with slate-black hilum and green germ.

96565. No. 8684. Station no. 714. Medium size, mottled with black, seed coat slightly split.

96566. No. 8685. Station no. 715. Medium size.

96567. No. 8686. Station no. 716. Medium large, seed coat wrinkled and split.

96568. No. 8687. Station no. 717. Medium large, seed coat somewhat split, slight purple spot.

96569. No. 8688. Station no. 718. Medium size.

96570. No. 8689. Station no. 719. Medium size, seed coat somewhat wrinkled and split.

96571. No. 8690. Station no. 720. Large size, seed coat somewhat wrinkled.

96572. No. 8691. Station no. 721. Medium size, seed coat slightly wrinkled and split.

96530 to 97251—Continued

96573. No. 8692. Station no. 722. Medium size, seed coat slightly wrinkled.

96574. No. 8693. Station no. 723. Medium large, green with brown hilum and green germ; seed coat more or less split.

96575 to 96577. Medium size, green with slate-black hilum and green germ.

96575. No. 8694. Station no. 724. Seed coat somewhat wrinkled.

96576. No. 8695. Station no. 725. Seed coat somewhat wrinkled and split.

96577. No. 8696. Station no. 726.

96578 to 96580. Medium size, green with dark-brown hilum and green germ.

96578. No. 8697. Station no. 727.

96579. No. 8698. Station no. 728.

96580. No. 8699. Station no. 729. Slightly mottled with brown.

96581. No. 8700. Station no. 730. Medium size, straw-yellow to green with brown hilum; some purple spot.

96582. No. 8701. Station no. 731. Medium size, green with brown hilum and green germ.

96583. No. 8702. Station no. 732. Medium large, green with dark-brown hilum and green germ; heavily mottled with brown.

96584. No. 8703. Station no. 733. Medium size, green with dark-brown hilum and green germ.

96585. No. 8704. Station no. 734. Medium size, green with brown hilum and green germ.

96586. No. 8705. Station no. 735. Medium small, green with brown hilum; slightly mottled with brown.

96587. No. 8706. Station no. 736. Medium small, green with brown hilum and green germ; slightly mottled with brown.

96588. No. 8707. Station no. 737. Medium size, green with brown hilum; slightly mottled with dark brown.

96589. No. 8708. Station no. 738. Medium size, green with dark-brown hilum; heavily mottled with brown.

96590. No. 8709. Station no. 739. Medium small, green with brown hilum and yellow germ.

96591 to 96594. Green with brown hilum and green germ.

96591. No. 8710. Station no. 740. Medium small, mottled with dark brown.

96592. No. 8711. Station no. 741. Medium size, slightly mottled with dark brown.

96593. No. 8712. Station no. 742. Medium size, seed coat slightly split.

96594. No. 8713. Station no. 743. Medium large.

96595. No. 8714. Station no. 744. Medium size, olive, heavily mottled with black.

96596 to 96598. Medium size, green with brown hilum and green germ.

96530 to 97251—Continued

96596. No. 8715. Station no. 745.

96597. No. 8716. Station no. 746. Mottled with brown.

96598. No. 8717. Station no. 747. Slightly mottled with brown.

96599. No. 8718. Station no. 748. Medium size, green with large dark-brown hilum and green germ; slightly mottled with brown; seed coat more or less wrinkled and split.

96600 and 96601. Medium size, green with brown hilum and green germ; slightly mottled with brown.

96600. No. 8719. Station no. 749.

96601. No 8720. Station no. 750.

96602. No. 8721. Station no. 751. Medium small, green with brown hilum and green germ.

96603 and 96604. Green with brown hilum and green germ; slightly mottled with brown.

96603. No. 8722. Station no. 752. Very small.

96604. No. 8723. Station no. 753. Medium size.

96605. No. 8724 Station no. 754. Medium small, green with brown hilum and green germ; mottled with brown.

96606. No. 8725. Station no. 755. Medium size, green with pale hilum and green germ; mottled with brown.

96607. No. 8726. Station no. 756. Medium size, green with brown hilum and green germ; seed coat more or less wrinkled.

96608. No. 8727. Station no. 757. Medium size, green with brown hilum; seed coat slightly wrinkled.

96609 to 96611. Medium size, green with brown hilum and green germ.

96609. No. 8728. Station no. 758.

96610. No. 8729. Station no. 759. Slightly mottled with brown.

96611. No. 8730. Station no. 760. Slightly affected with purple spot.

96612. No. 8731. Station no. 761. Medium size, straw- to olive-yellow with yellow to green germ.

96613 to 96615. Medium size, green with brown hilum and green germ; seed coat more or less wrinkled.

96613. No. 8732. Station no. 762.

96614. No. 8733. Station no. 763. Seed coat split.

96615. No. 8734. Station no. 764.

96616. No. 8735. Station no. 765. Medium size, straw-yellow to green with brown hilum and green germ.

96617 to 96620. Medium size, green with brown hilum and green germ.

96617. No. 8736. Station no. 766.

96618. No. 8737. Station no. 767.

96619. No. 8738. Station no. 768. Mottled with brown, seed coat slightly wrinkled and split.

96620. No. 8739. Station no. 769. Slightly mottled with brown.

96530 to 97251—Continued

96621 and 96622. Medium small, green with brown hilum and green germ.

96621. No. 8740. Station no. 770.

96622. No. 8741. Station no. 771. Mottled slightly with brown.

96623 to 96626. Medium size, green with brown hilum and green germ; slightly mottled with brown.

96623. No. 8742. Station no. 772.

96624. No. 8743. Station no. 773.

96625. No. 8744. Station no. 774.

96626. No. 8745. Station no. 775. Seed coat slightly wrinkled and split.

96627. No. 8746. Station no. 776. Medium size, straw-yellow to green with brown hilum and green germ; seed coat slightly wrinkled and split.

96628. No. 8747. Station no. 777. Medium size, green with brown hilum and green germ; slightly mottled with brown; seed coat split.

96629 and 96630. Medium size, green with brown hilum and green germ; seed coat wrinkled.

96629. No. 8748. Station no. 778.

96630. No. 8749. Station no. 779. Seed coat split.

96631. No. 8750. Station no. 780. Medium size, olive-yellow to green with green germ; slightly mottled with brown.

96632. No. 8751. Station no. 781. Medium size, straw-yellow to green with brown hilum and olive-yellow to green germ; mottled with brown.

96633. No. 8752. Station no. 782. Medium large, green with pale hilum and green germ; slightly mottled with brown; seed coat slightly split.

96634 and 96635. Medium size, green with light brown hilum and green germ.

96634. No. 8753. Station no. 783.

96635. No. 8754. Station no. 784.

96636. No. 8755. Station no. 785. Medium large, green with brown hilum and green germ; slightly mottled with brown; seed coat split.

96637. No. 8756. Station no. 786. Medium size, straw-yellow to green with brown hilum and green germ; mottled with brown.

96638. No. 8757. Station no. 787. Medium size, olive-yellow to green with dark-brown hilum and green germ; heavily mottled with dark brown.

96639. No. 8758. Station no. 788. Medium size, green with brown hilum and green germ; heavily mottled with dark brown.

96640 to 96643. Medium size, green with pale hilum and green germ.

96640. No. 8759. Station no. 789.

96641. No. 8760. Station no. 790. Mottled with brown.

96642. No. 8761. Station no. 791. Mottled with brown.

96643. No. 8762. Station no. 792. Mottled with brown.

96530 to 97251—Continued

96644. No. 8763. Station no. 793. Medium small, olive-yellow to green with pale hilum and green germ; mottled with brown.

96645. No. 8764. Station no. 794. Medium large, green with pale hilum and green germ; mottled with brown.

96646. No. 8765. Station no. 795. Medium size, green with pale hilum and green germ; slightly mottled with brown.

96647. No. 8766. Station no. 796. Medium size, olive-yellow to green with pale hilum and green germ; heavily mottled with brown.

96648. No. 8767. Station no. 797. Medium size, green with pale hilum and green germ; heavily mottled with brown.

96649. No. 8768. Station no. 798. Medium size, olive-yellow to green with pale hilum and yellowish-green to green germ; heavily mottled with brown.

96650. No. 8769. Station no. 799. Medium small, black with yellow germ; slightly flattened.

96651 and 96652. Medium size, black with yellow germ.

96651. No. 8770. Station no. 800.

96652. No. 8771. Station no. 801.

96653. No. 8772. Station no. 802. Large size, black with yellow germ; slightly flattened.

96654 and 96655. Medium size, black with yellow germ.

96654. No. 8773. Station no. 803.

96655. No. 8774. Station no. 804.

96656 to 96662. Medium large, black with yellow germ.

96656. No. 8775. Station no. 805.

96657. No. 8776. Station no. 806.

96658. No. 8777. Station no. 807.

96659. No. 8778. Station no. 808.

96660. No. 8779. Station no. 809.

96661. No. 8780. Station no. 810.

96662. No. 8781. Station no. 811.

96663 to 96686. Black with yellow germ.

96663. No. 8782. Station no. 812. Large size.

96664. No. 8783. Station no. 813. Large size.

96665. No. 8784. Station no. 814. Medium size.

96666. No. 8785. Station no. 815. Medium large.

96667. No. 8786. Station no. 816. Medium small.

96668. No. 8787. Station no. 817. Large size.

96669. No. 8788. Station no. 818. Medium size, seed coat slightly split.

96670. No. 8789. Station no. 819. Large size.

96671. No. 8790. Station no. 820. Large size.

96530 to 97251—Continued

96672. No. 8791. Station no. 821. Medium size.

96673. No. 8792. Station no. 822. Medium large.

96674. No. 8793. Station no. 823. Medium size.

96675. No. 8794. Station no. 824. Medium size.

96676. No. 8795. Station no. 825. Medium large.

96677. No. 8796. Station no. 826. Medium large.

96678. No. 8797. Station no. 827. Medium to medium large.

96679. No. 8798. Station no. 828. Medium large.

96680. No. 8799. Station no. 829. Medium large.

96681. No. 8800. Station no. 830. Medium large.

96682. No. 8801. Station no. 831. Medium size.

96683. No. 8802. Station no. 832. Medium large, seed coat split.

96684. No. 8803. Station no. 833. Medium large.

96685. No. 8804. Station no. 834. Medium large.

96686. No. 8805. Station no. 835. Medium large.

96687. No. 8806. Station no. 836. Medium size, brown with yellow germ.

96688 to 96715. Black with yellow germ.

96688. No. 8807. Station no. 837. Medium size.

96689. No. 8808. Station no. 838. Large size.

96690. No. 8809. Station no. 839. Medium large.

96691. No. 8810. Station no. 840. Medium large.

96692. No. 8811. Station no. 841. Medium large.

96693. No. 8812. Station no. 842. Large size, seed coat slightly split.

96694. No. 8813. Station no. 843. Medium large.

96695. No. 8814. Station no. 844. Medium large.

96696. No. 8815. Station no. 845. Medium size.

96697. No. 8816. Station no. 846. Medium large.

96698. No. 8817. Station no. 847. Large size.

96699. No. 8818. Station no. 848. Large size, seed coat split.

96700. No. 8819. Station no. 849. Medium large.

96701. No. 8820. Station no. 850. Large size.

96702. No. 8821. Station no. 851. Large size.

96703. No. 8822. Station no. 852. Medium large.

96704. No. 8823. Station no. 853. Medium large.

96530 to 97251—Continued

96705. No. 8824. Station no. 854. Medium size.

96706. No. 8825. Station no. 855. Medium large.

96707. No. 8826. Station no. 856. Medium small.

96708. No. 8827. Station no. 857. Medium small.

96709. No. 8828. Station no. 858. Medium small.

96710. No. 8829. Station no. 859. Medium small.

96711. No. 8830. Station no. 860. Medium size.

96712. No. 8831. Station no. 861. Medium small.

96713. No. 8832. Station no. 862. Medium small.

96714. No. 8833. Station no. 863. Medium small.

96715. No. 8834. Station no. 864. Medium size.

96716 to 96722. Medium small, black with yellow germ.

96716. No. 8835. Station no. 865.

96717. No. 8836. Station no. 866.

96718. No. 8837. Station no. 867.

96719. No. 8838. Station no. 868.

96720. No. 8839. Station no. 869.

96721. No. 8840. Station no. 870.

96722. No. 8841. Station no. 871.

96723. No. 8842. Station no. 872. Medium small, black with yellow germ.

96724. No. 8843. Station no. 873. Medium large, black with green germ.

96725 to 96727. Medium size, black with yellow germ.

96725. No. 8844. Station no. 874.

96726. No. 8845. Station no. 875.

96727. No. 8846. Station no. 876.

96728. No. 8847. Station no. 877. Large size, black with yellow germ, seed coat split.

96729 to 96738. Black with yellow germ.

96729. No. 8848. Station no. 878. Medium small.

96730. No. 8849. Station no. 879. Medium large.

96731. No. 8850. Station no. 880. Medium size.

96732. No. 8851. Station no. 881. Medium small.

96733. No. 8852. Station no. 882. Medium size.

96734. No. 8853. Station no. 883. Medium size.

96735. No. 8854. Station no. 884. Medium size, seed coat split.

96736. No. 8855. Station no. 885. Very small.

96737. No. 8856. Station no. 886. Medium small.

96738. No. 8857. Station no. 887. Medium small.

96530 to 97251—Continued

96739 to 96743. Black with yellow germ, seed coat split.

96739. No. 8858. Station no. 888. Large size.

96740. No. 8859. Station no. 889. Medium large.

96741. No. 8860. Station no. 890. Large size.

96742. No. 8861. Station no. 891. Large size.

96743. No. 8862. Station no. 892. Large size.

96744 and 96745. Medium large, black with yellow germ; seed coat slightly split.

96744. No. 8863. Station no. 893.

96745. No. 8864. Station no. 894.

96746. No. 8865. Station no. 895. Medium large, black with yellow germ; seed coat split into fine network on sides.

96747 to 96749. Medium large, black with yellow germ; seed coat slightly split.

96747. No. 8866. Station no. 896.

96748. No. 8867. Station no. 897.

96749. No. 8868. Station no. 898.

96750. No. 8869. Station no. 899. Large size, black with yellow germ; seed coat slightly split.

96751. No. 8870. Station no. 900. Medium large, black with yellow germ; seed coat slightly split.

96752. No. 8871. Station no. 901. Medium large, black with yellow germ; seed coat slightly split into network on sides.

96753. No. 8872. Station no. 902. Medium large, black with yellow germ; seed coat slightly split.

96754 and 96755. Medium large, black with yellow germ; seed coat split into network on sides.

96754. No. 8873. Station no. 903.

96755. No. 8874. Station no. 904.

96756. No. 8875. Station no 905. Large size, black with yellow germ; seed coat slightly split.

96757 to 96762. Medium large, black with yellow germ; seed coat split into coarse network.

96757. No. 8876. Station no. 906.

96758. No. 8877. Station no. 907.

96759. No. 8878. Station no. 908.

96760. No. 8879. Station no. 909.

96761. No. 8880. Station no. 910.

96762. No. 8881. Station no. 911.

96763. No. 8882. Station no. 912. Medium large, black with yellow germ; seed coat split into fine network.

96764. No. 8863. Station no. 913. Medium large, black with yellow germ; seed coat split into coarse network.

96765. No. 8864. Station no. 914. Medium large, black with yellow germ; seed coat split into fine network.

96766. No. 8865. Station no. 915. Medium large, black with yellow germ.

96530 to 97251—Continued

96767 to 96770. Medium large, black with yellow germ; seed coat split into coarse network.

96767. No. 8886. Station no. 916.

96768. No. 8887. Station no. 917.

96769. No. 8888. Station no. 918.

96770. No. 8889. Station no. 919.

96771 to 96775. Medium large, black with yellow germ.

96771. No. 8890. Station no. 920. Seed coat split into fine network.

96772. No. 8891. Station no. 921. Seed coat split into coarse network.

96773. No. 8892. Station no. 922.

96774. No. 8893. Station no. 923. Seed coat split into coarse network.

96775. No. 8894. Station no. 924. Seed coat split into coarse network.

96776. No. 8895. Station no. 925. Large size, black with yellow germ; seed coat split into coarse network.

96777. No. 8896. Station no. 926. Medium large, black with yellow germ; seed coat split into fine network.

96778 to 96780. Medium large, black with yellow germ; seed coat split into coarse network.

96778. No. 8897. Station no. 927.

96779. No. 8898. Station no. 928.

96780. No. 8899. Station no. 929.

96781 and 96782. Medium large, black with yellow germ.

96781. No. 8900. Station no. 930. Seed coat split into fine network.

96782. No. 8901. Station no. 931. Seed coat split into coarse network.

96783 and 96784. Medium size, straw-yellow with pale hilum; mottled with brown.

96783. No. 8902. Station no. 932. Heavily mottled.

96784. No. 8903. Station no. 933. Slightly mottled.

96785. No. 8904. Station no. 934. Medium size, straw-yellow with dark-brow hilum; mottled with dark brown.

96786 and 96787. Medium size, straw-yellow with pale hilum.

96786. No. 8905. Station no. 935.

96787. No. 8906. Station no. 936. Mottled with brown.

96788. No. 8907. Station no. 937. Medium size, straw-yellow with light-brown hilum; mottled with brown.

96789. No. 8908. Station no. 938. Medium size, straw- to olive-yellow with brown hilum; heavily mottled with brown.

96790. No. 8909. Station no. 939. Medium large, olive-yellow; mottled with brown.

96791. No. 8910. Station no. 940. Medum large, straw-yellow with brown hilum; heavily mottled with brown.

96792. No. 8911. Station no. 941. Medium large, straw-yellow with pale hilum; mottled with brown; seed coat wrinkled and split.

96793. No. 8912. Station no. 942. Medium size, straw-yellow with brown hilum; mottled with brown.

96794 to 96796. Medium small, straw-yellow with brown hilum.

96794. No. 8913. Station no. 943.

96795. No. 8914. Station no. 944.

96796. No. 8915. Station no. 945. Heavily mottled with brown.

96797 to 96800. Medium size, straw-yellow with pale hilum; mottled with brown.

96797. No. 8916. Station no. 946. Slightly mottled.

96798. No. 8917. Station no. 947.

96799. No. 8918. Station no. 948. Slightly mottled.

96800. No. 8919. Station no. 949. Slightly mottled.

96801. No. 8920. Station no. 950. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96802. No. 8921. Station no. 951. Medium small, black and brown with black formed in concentric rings.

96803 to 96805. Medium size, straw-yellow with pale hilum.

96803. No. 8922. Station no. 952.

96804. No. 8923. Station no. 953. Slightly mottled with brown; some purple spot.

96805. No. 8924. Station no. 954. Slightly mottled with brown.

96806. No. 8925. Station no. 955. Medium size, straw-yellow with brown hilum; mottled with brown.

96807. No. 8926. Station no. 956. Medium size, straw- to olive-yellow with pale hilum; seed coat slightly split.

96808. No. 8927. Station no. 957. Medium small, straw-yellow with pale hilum; slightly mottled with brown.

96809. No. 8928. Station no. 958. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96810. No. 8929. Station no. 959. Medium size, olive-yellow with dark-brown hilum; slightly mottled with brown.

96811. No. 8930. Station no. 960. Medium size, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96812. No. 8931. Station no. 961. Medium size, straw-yellow with pale hilum.

96813. No. 8932. Station no. 962. Medium small, straw-yellow with black hilum; mottled with black and brown.

96814 and 96815. Straw-yellow with pale hilum; slightly mottled with brown.

96814. No. 8933. Station no. 963. Medium size.

96815. No. 8934. Station no. 964. Medium large.

96816. No. 8935. Station no. 965. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96530 to 97251—Continued

96817. No. 8936. Station no. 966. Medium size, straw- to olive-yellow with pale hilum; some purple spot.

96818. No. 8937. Station no. 967. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96819. No. 8938. Station no. 968. Medium large, black with yellow germ; seed coat split.

96820. No. 8939. Station no. 969. Medium size, black and brown with the black arranged in concentric rings; yellow germ.

96821. No. 8940. Station no. 970. Medium size, brown with yellow germ.

96822. No. 8941. Station no. 971. Medium size, straw-yellow with pale hilum; mottled with brown.

96823. No. 8942. Station no. 972. Medium size, straw- to olive-yellow with black hilum; mottled with dark brown.

96824 and 96825. Medium size, straw-yellow with brown hilum; mottled with brown.

96824. No. 8943. Station no. 973. Heavily mottled.

96825. No. 8944. Station no. 974.

96826. No. 8945. Station no. 975. Very small, straw-yellow with dark-brown hilum; mottled with brown.

96827 and 96828. Medium size, straw-yellow, heavily mottled with brown.

96827. No. 8946. Station no. 976. Brown hilum.

96828. No. 8947. Station no. 977. Pale hilum.

96829. No. 8948. Station no. 978. Medium size, straw-yellow with pale hilum; mottled with brown.

96830 and 96831. Medium size, straw-yellow, slightly mottled with brown.

96830. No. 8949. Station no. 979. Brown hilum.

96831. No. 8950. Station no. 980. Pale hilum.

96832. No. 8951. Station no. 981. Medium small, straw-yellow with dark-brown hilum.

96833 to 96835. Medium size, straw-yellow, mottled with brown.

96833. No. 8952. Station no. 982. Pale hilum.

96834. No. 8953. Station no. 983. Brown hilum.

96835. No. 8954. Station no. 984. Pale hilum.

96836. No. 8955. Station no. 985. Small size, brown hilum; heavily mottled with brown.

96837. No. 8956. Station no. 986. Medium large, straw-yellow with brown hilum; slightly mottled with brown.

96838. No. 8957. Station no. 987. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

96839 and 96840. Medium size, straw-yellow, slightly mottled with brown.

96839. No. 8958. Station no. 988. Dark-brown hilum.

96530 to 97251—Continued

96840. No. 8959. Station no. 989. Pale hilum.

96841. No. 8960. Station no. 990. Medium size, straw- to olive-yellow with pale hilum.

96842 and 96843. Medium size, straw-yellow with brown hilum.

96842. No. 8961. Station no. 991. Heavily mottled with brown.

96843. No. 8962. Station no. 992.

96844 to 96846. Straw-yellow with pale hilum.

96844. No. 8963. Station no. 993. Medium size.

96845. No. 8964. Station no. 994. Medium small.

96846. No. 8965. Station no. 995. Medium.

96847. No. 8966. Station no. 996. Medium size, light straw-yellow with brown hilum; slightly mottled with brown.

96848. No. 8967. Station no. 997. Medium size, olive-yellow, with dark-brown hilum; slightly mottled with dark brown.

96849 and 96850. Medium size, straw-yellow.

96849. No. 8968. Station no. 998. Pale hilum.

96850. No. 8969. Station no. 999. Light-brown hilum.

96851. No. 8970. Station no. 1000. Medium small, black with green germ.

96852. No. 8971. Station no. 1001. Medium size, olive-yellow with dark-brown hilum; slightly mottled with dark brown.

96853. No. 8972. Station no. 1002. Medium size, green with brown hilum and green germ.

96854 and 96855. Medium size, straw-yellow with brown hilum.

96854. No. 8973. Station no. 1003.

96855. No. 8974. Station no. 1004.

96856. No. 8975. Station no. 1005. Medium size, straw-yellow with pale hilum.

96857. No. 8976. Station no. 1006. Medium size, straw-yellow with black hilum; mottled with black.

96858 and 96859. Olive-yellow with black hilum; heavily mottled with black.

96858. No. 8977. Station no. 1007. Medium size.

96859. No. 8978. Station no. 1008. Small size, nearly round.

96860. No. 8979. Station no. 1009. Small size, straw-yellow with black hilum, nearly round; heavily mottled with black.

96861. No. 8980. Station no. 1010. Very small, nearly round, straw- to olive-yellow with black hilum; heavily mottled with black.

96862 and 96863. Medium size, straw-yellow with black hilum.

96862. No. 8981. Station no. 1011. Mottled with dark brown.

96530 to 97251—Continued

96863. No. 8982. Station no. 1012. Mottled with brown.

96864 to 96866. Medium size, straw-yellow with dark-brown hilum.

96864. No. 8983. Station no. 1013.

96865. No. 8984. Station no. 1014.

96866. No. 8985. Station no. 1015.

96867. No. 8986. Station no. 1016. Medium small, straw-yellow with brown hilum; slightly mottled with brown.

96868. No. 8987. Station no. 1017. Medium size, straw-yellow with dark-brown hilum; slightly mottled with brown.

96869. No. 8988. Station no. 1018. Small size, straw- to olive-yellow with dark-brown hilum; nearly round and slightly mottled with brown.

96870 to 96874. Straw-yellow with brown hilum; slightly mottled with brown.

96870. No. 8989. Station no. 1019. Medium small.

96871. No. 8990. Station no. 1020. Medium size.

96872. No. 8991. Station no. 1021. Medium size, some purple spot.

96873. No. 8992. Station no. 1022. Medium size.

96874. No. 8993. Station no. 1023. Medium small, nearly round.

96875. No. 8994. Station no. 1024. Very small, nearly round, straw-yellow with pale hilum; slightly mottled with brown.

96876. No. 8995. Station no. 1025. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96877. No. 8996. Station no. 1026. Medium large, straw- to olive-yellow with light-brown hilum; slightly mottled with brown.

96878 and 96879. Medium size, straw-yellow, mottled with brown.

96878. No. 8997. Station no. 1027. Brown hilum.

96879. No. 8998. Station no. 1028. Pale hilum.

96880. No. 8999. Station no. 1029. Medium size, straw-yellow with light-brown hilum.

96881 and 96882. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96881. No. 9000. Station no. 1030.

96882. No. 9001. Station no. 1031.

96883. No. 9002. Station no. 1032. Medium size, straw-yellow with pale hilum; mottled with dark brown.

96884. No. 9003. Station no. 1033. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

96885 to 96891. Medium size, straw-yellow, slightly mottled with brown.

96885. No. 9004. Station no. 1034. Pale hilum.

96886. No. 9005. Station no. 1035. Light-brown hilum.

96887. No. 9006. Station no. 1036. Pale hilum.

96530 to 97251—Continued

96888. No. 9007. Station no. 1037. Light-brown hilum.

96889. No. 9008. Station no. 1038. Brown hilum.

96890. No. 9009. Station no. 1039. Light-brown hilum.

96891. No. 9010. Station no. 1040. Light-brown hilum.

96892. No. 9011. Station no. 1041. Medium small, straw yellow with pale hilum; mottled with brown.

96893. No. 9012. Station no. 1042. Medium size, olive-yellow with black hilum; heavily mottled with black.

96894. No. 9013. Station no. 1043. Medium large, olive-yellow with dark-brown hilum; seed coat more or less split.

96895. No. 9014. Station no. 1044. Medium size, olive-yellow with light-brown hilum.

96896 and 96897. Medium size, very dark-brown with green germ.

96896. No. 9015. Station no. 1045.

96897. No. 9016. Station no. 1046.

96898. No. 9017. Station no. 1047. Medium size, green with brown hilum.

96899. No. 9018. Station no. 1048. Medium size, straw- to olive-yellow with light-brown hilum; mottled with brown.

96900 and 96901. Medium size, green with dark-brown hilum.

96900. No. 9019. Station no. 1049.

96901. No. 9020. Station no. 1050.

96902 to 96904. Green with brown hilum; slightly mottled with brown.

96902. No. 9021. Station no. 1051. Medium small.

96903. No. 9022. Station no. 1052. Medium size.

96904. No. 9023. Station no. 1053. Medium size.

96905. No. 9024. Station no. 1054. Medium size, olive with black hilum and yellow germ; very heavily mottled with black.

96906. No. 9025. Station no. 1055. Medium size, black with yellow germ.

96907 and 96908. Medium size, black and brown with black arranged in concentric rings.

96907. No. 9026. Station no. 1056.

96908. No. 9027. Station no. 1057.

96909. No. 9028. Station no. 1058. Medium size, straw-yellow with pale hilum; heavily mottled with dark brown.

96910. No. 9029. Station no. 1059. Medium size, straw-yellow with black hilum; heavily mottled with black.

96911. No. 9030. Station no. 1060. Medium size, olive-yellow and black.

96912. No. 9031. Station no. 1061. Medium size, light brown with a pale hilum; seed coat somewhat split.

96913. No. 9032. Station no. 1062. Small size, nearly round light brown with pale hilum; very similar to *Brownie* (17256).

96530 to 97251—Continued

96914. No. 9033. Station no. 1063. Medium size, reddish brown.

96915. No. 9034. Station no. 1064. Medium size, olive-brown; seed coat more or less split.

96916. No. 9035. Station no. 1065. Medium size, brown.

96917. No. 9036. Station no. 1066. Medium size, black; seed coat split into fine network.

96918. No. 9037. Station no. 1067. Medium size, black with green germ.

96919. No. 9038. Station no. 1068. Medium size, slightly flattened, black with yellow germ.

96920. No. 9039. Station no. 1069. Medium size, reddish brown; seed coat more or less split.

96921. No. 9040. Station no. 1070. Small size, brown.

96922. No. 9041. Station no. 1071. Medium size, straw- to olive-yellow with pale hilum; heavily mottled with brown and black.

96923. No. 9042. Station no. 1072. Medium size, olive-yellow with brown hilum; heavily mottled with brown.

96924. No. 9043. Station no. 1073. Medium size, dark brown with yellow germ.

96925. No. 9044. Station no. 1074. Medium size, straw-yellow with dark-brown hilum; mottled with dark brown.

96926. No. 9045. Station no. 1075. Medium size, straw- to olive-yellow with dark-brown hilum; mottled with brown.

96927. No. 9046. Station no. 1076. Very small, straw-yellow with dark-brown hilum.

96928 and 96929. Straw-yellow with brown hilum; heavily mottled with brown.

96928. No. 9047. Station no. 1077. Small size.

96929. No. 9048. Station no. 1078. Medium size.

96930. No. 9049. Station no. 1079. Medium size, slightly flattened, straw-yellow with dark-brown hilum; slightly mottled with brown.

96931. No. 9050. Station no. 1080. Medium size, straw-yellow with dark-brown hilum; mottled with dark brown.

96932. No. 9051. Station no. 1081. Medium size, straw- to olive-yellow with dark-brown hilum; mottled with dark brown.

96933. No. 9052. Station no. 1082. Medium size, green with dark-brown hilum; heavily mottled with dark brown.

96934. No. 9053. Station no. 1083. Medium large, straw-yellow with dark-brown hilum; heavily mottled with brown.

96935. No. 9054. Station no. 1084. Medium size, olive-yellow with dark-brown hilum; heavily mottled with dark brown.

96936. No. 9055. Station no. 1085. Medium size, straw-yellow with brown hilum; mottled with brown.

96530 to 97251—Continued

96937. No. 9056. Station no. 1086. Large size, black with yellow germ.

96938. No. 9057. Station no. 1087. Medium small, nearly round, straw-yellow with brown hilum; mottled with brown.

96939 and 96940. Medium size, olive with black hilum; heavily mottled with brown.

96939. No. 9058. Station no. 1088.

96940. No. 9059. Station no. 1089. Nearly round.

96941. No. 9060. Station no. 1090. Medium small, olive-yellow with black hilum; heavily mottled with black.

96942. No. 9061. Station no. 1091. Small size, nearly round, olive with black hilum; heavily mottled with black.

96943 to 96949. Medium small, nearly round, olive, with black hilum; heavily mottled with black.

96943. No. 9062. Station no. 1092.

96944. No. 9063. Station no. 1093.

96945. No. 9064. Station no. 1094.

96946. No. 9065. Station no. 1095.

96947. No. 9066. Station no. 1096.

96948. No. 9067. Station no. 1097.

96949. No. 9068. Station no. 1098.

96950. No. 9069. Station no. 1099. Medium size, nearly round, olive with black hilum; heavily mottled with black.

96951 and 96952. Medium size, straw-yellow with black hilum; heavily mottled with black.

96951. No. 9070. Station no. 1100. Nearly round.

96952. No. 9071. Station no. 1101.

96953 and 96954. Medium small, straw- to olive-yellow with black hilum; heavily mottled with black.

96953. No. 9072. Station no. 1102.

96954. No. 9073. Station no. 1103.

96955 to 96957. Medium large, straw-yellow with black hilum; slightly mottled with black.

96955. No. 9074. Station no. 1104.

96956. No. 9075. Station no. 1105.

96957. No 9076. Station no. 1106.

96958. No. 9077. Station no. 1107. Medium size, straw-yellow with black hilum.

96959 to 96961. Medium size, straw-yellow with dark-brown hilum; mottled with brown.

96959. No. 9078. Station no. 1108.

96960. No. 9079. Station no. 1109.

96961. No. 9080. Station no. 1110.

96962. No. 9081. Station no. 1111. Medium small, nearly round, straw-yellow with black hilum; mottled with black.

96963. No. 9082. Station no. 1112. Medium size; straw-yellow with dark-brown hilum; mottled with dark brown.

96530 to 97251—Continued

96964. No. 9083. Station no. 1113. Medium size, nearly round, straw-yellow with brown hilum; slightly mottled with brown; seed coat split.

96965. No. 9084. Station no. 1114. Medium size, straw-yellow with black hilum; mottled with black.

96966. No. 9085. Station no. 1115. Medium size, nearly round, straw-yellow with dark-brown hilum; mottled with dark brown.

96967. No. 9086. Station no. 1116. Medium size, straw- to olive-yellow with dark-brown hilum; mottled with dark brown.

96968. No. 9087. Station no. 1117. Medium size, straw-yellow with dark-brown hilum.

96969. No. 9088. Station no. 1118. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96970. No. 9089. Station no. 1119. Medium large, straw-yellow with dark-brown hilum; seed coat somewhat split.

96971. No. 9090. Station no. 1120. Medium size, straw-yellow with brown hilum; somewhat mottled with brown.

96972 and 96973. Medium large, straw-yellow with black hilum; mottled with brown and black;

96972. No. 9091. Station no. 1121. Seed coat very much split.

96973. No. 9092. Station no. 1122. Seed coat much split.

96974. No. 9093. Station no. 1123. Medium large, straw-yellow with dark-brown hilum; seed coat slightly wrinkled and split.

96975 and 96976. Straw-yellow with brown hilum; mottled with brown; seed coat badly split.

96975. No. 9094. Station no. 1124. Medium size.

96976. No. 9095. Station no. 1125. Medium large.

96977. No. 9096. Station no. 1126. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

96978. No. 9097. Station no. 1127. Medium size, straw-yellow with brown hilum; mottled with brown; seed coat slightly split.

96979. No. 9098. Station no. 1128. Medium size, olive-yellow with dark-brown hilum; slightly mottled with brown.

96980. No. 9099. Station no. 1129. Medium size, straw-yellow with brown hilum; very heavily mottled with dark brown.

96981. No. 9100. Station no. 1130. Medium size, straw-yellow with dark-brown hilum; mottled with dark brown.

96982. No. 9101. Station no. 1131. Medium large, straw-yellow with slate-black hilum; mottled with black.

96983. No. 9102. Station no. 1132. Medium size, straw-yellow with brown hilum.

96530 to 97251—Continued

96984. No. 9103. Station no. 1133. Medium size, straw-yellow with large dark-brown hilum; slightly mottled with brown.

96985. No. 9104. Station no. 1134. Medium size, nearly round, straw-yellow with dark-brown hilum; slightly mottled with brown.

96986. No. 9105. Station no. 1135. Medium size, olive-yellow with brown hilum; heavily mottled with dark brown.

96987. No. 9106. Station no. 1136. Medium size, olive-yellow with dark-brown hilum; slightly mottled with dark brown.

96988. No. 9107. Station no. 1137. Medium large, straw-yellow with dark-brown hilum; slightly mottled with dark brown.

96989. No. 9108. Station no. 1138. Medium size, straw- to olive-yellow with dark-brown hilum; heavily mottled with dark brown.

96990 and 96991. Medium size, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96990. No. 9109. Station no. 1139. Nearly round.

96991. No. 9110. Station no. 1140.

96992. No. 9111. Station no. 1141. Medium size, straw- to olive-yellow with dark-brown hilum; slightly mottled with dark brown.

96993 to 96995. Medium size, straw-yellow with dark-brown hilum; slightly mottled with brown.

96993. No. 9112. Station no. 1142. Heavily mottled with dark brown.

96994. No. 9113. Station no. 1143.

96995. No. 9114. Station no. 1144. Slightly flattened.

96996. No. 9115. Station no. 1145. Very small, nearly round, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96997. No. 9116. Station no. 1146. Small size, straw- to olive-yellow with dark-brown hilum; heavily mottled with dark brown.

96998. No. 9117. Station no. 1147. Medium size, straw-yellow with dark-brown hilum; slightly mottled with dark brown.

96999. No. 9118. Station no. 1148. Small size, straw- to olive-yellow with dark-brown hilum; heavily mottled with dark brown.

97000 to 97002. Straw-yellow with brown hilum; mottled with brown.

97000. No. 9119. Station no. 1149. Medium large.

97001. No. 9120. Station no. 1150. Large size.

97002. No. 9121. Station no. 1151. Medium size.

97003 and 97004. Medium small, straw- to olive-yellow with brown hilum; heavily mottled with brown.

97003. No. 9122. Station no. 1152. Hilum and mottling are both dark brown.

96530 to 97251—Continued

97004. No. 9123. Station no. 1153.

97005. No. 9124. Station no. 1154. Medium size, straw- to olive-yellow with brown hilum; mottled with brown.

97006. No. 9125. Station no. 1155. Medium large, straw-yellow with dark-brown hilum; mottled with brown.

97007. No. 9126. Station no. 1156. Large size, straw-yellow with pale hilum; slightly mottled with brown.

97008 and 97009. Straw-yellow with dark-brown hilum; mottled with brown.

97008. No. 9127. Station no. 1157. Medium large.

97009. No. 9128. Station no. 1158. Medium size.

97010 and 97011. Medium size, straw-yellow with brown hilum; mottled with brown.

97010. No. 9129. Station no. 1159.

97011. No. 9130. Station no. 1160.

97012. No. 9131. Station no. 1161. Medium large, straw- to olive-yellow with brown hilum; heavily mottled with brown.

97013. No. 9132. Station no. 1162. Medium size, straw-yellow with brown hilum; mottled with brown.

97014. No. 9133. Station no. 1163. Medium size, straw- to olive-yellow with brown hilum; mottled slightly with brown.

97015. No. 9134. Station no. 1164. Large size, straw- to olive-yellow with light-brown hilum; mottled with brown; seed coat more or less split.

97016 and 97017. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

97016. No. 9135. Station no. 1165.

97017. No. 9136. Station no. 1166.

97018 and 97019. Medium size, straw-yellow, heavily mottled with brown.

97018. No. 9137. Station no. 1167. Hilum dark brown.

97019. No. 9138. Station no. 1168. Hilum brown.

97020. No. 9139. Station no. 1169. Medium size, straw- to olive-yellow with dark-brown hilum; mottled with dark brown.

97021. No. 9140. Station no. 1170. Medium small, nearly round, straw-yellow with dark-brown hilum; mottled with brown.

97022. No. 9141. Station no. 1171. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

97023 and 97024. Straw-yellow with dark-brown hilum; slightly mottled with dark brown.

97023. No. 9142. Station no. 1172. Medium large.

97024. No. 9143. Station no. 1173. Medium large.

97025. No. 9144. Station no. 1174. Medium size, slightly flattened, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

96530 to 97251—Continued

97026. No. 9145. Station no. 1175. Medium size, straw-yellow with dark-brown hilum; mottled with dark brown.

97027. No. 9146. Station no. 1176. Medium size, straw-yellow with brown hilum; mottled with brown.

97028. No. 9147. Station no. 1177. Medium size, straw-yellow with dark-brown hilum; slightly mottled with brown.

97029 and 97030. Medium size, straw-yellow with brown hilum; mottled with brown.

97029. No. 9148. Station no. 1178.

97030. No. 9149. Station no. 1179.

97031. No. 9150. Station no. 1180. Medium large, straw-yellow with light-brown hilum; slightly mottled with dark brown; seed coat slightly cracked.

97032. No. 9151. Station no. 1181. Medium size, straw-yellow with pale hilum; mottled with brown.

97033. No. 9152. Station no. 1182. Medium large, straw-yellow with light-brown hilum; slightly mottled with dark brown.

97034 and 97035. Medium size, straw yellow with pale hilum; heavily mottled with dark brown.

97034. No. 9153. Station no. 1183.

97035. No. 9154. Station no. 1184.

97036 and 97037. Medium size, nearly round, straw-yellow with dark-brown hilum; mottled with dark brown.

97036. No. 9155. Station no. 1185. Slightly mottled.

97037. No. 9156. Station no. 1186. Heavily mottled.

97038 to 97040. Medium size, straw-yellow with pale hilum; mottled with brown.

97038. No. 9157. Station no. 1187. Heavily mottled with dark brown.

97039. No. 9158. Station no. 1188.

97040. No. 9159. Station no. 1189. Heavily mottled.

97041 and 97042. Straw-yellow, slightly mottled with brown.

97041. No. 9160. Station no. 1190. Very small; pale hilum.

97042. No. 9161. Station no. 1191. Medium size; brown hilum.

97043 to 97046. Medium size, straw-yellow with brown hilum; mottled with brown.

97043. No. 9162. Station no. 1192.

97044. No. 9163. Station no. 1193.

97045. No. 9164. Station no. 1194.

97046. No. 9165. Station no. 1195. Heavily mottled with brown.

97047 and 97048. Medium size, straw-yellow with brown hilum.

97047. No. 9166. Station no. 1196.

97048. No. 9167. Station no. 1197. Slightly mottled with brown.

97049. No. 9168. Station no. 1198. Medium size, straw- to olive-yellow with pale hilum; mottled with brown; seed coat somewhat split.

96530 to 97251—Continued

97050. No. 9169. Station no. 1199. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

97051. No. 9170. Station no. 1200. Medium size, straw- to olive-yellow with pale hilum; heavily mottled with brown.

97052 to 97056. Medium size, straw-yellow with brown hilum; mottled with brown.

97052. No. 9171. Station no. 1201. Slightly mottled.

97053. No. 9172. Station no. 1202. Heavily mottled.

97054. No. 9173. Station no. 1203. Slightly mottled.

97055. No. 9174. Station no. 1204. Somewhat mottled.

97056. No. 9175. Station no. 1205. Slightly mottled.

97057 and 97058. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97057. No. 9176. Station no. 1206. Slightly mottled.

97058. No. 9177. Station no. 1207.

97059. No. 9178. Station no. 1208. Medium size, straw-yellow with brown hilum; heavily mottled with brown; seed coat more or less split.

97060 to 97063. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

97060. No. 9179. Station no. 1209.

97061. No. 9180. Station no. 1210.

97062. No. 9181. Station no. 1211.

97063. No. 9182. Station no. 1212.

97064. No. 9183. Station no. 1213. Medium small, straw-yellow with brown hilum; mottled with brown.

97065. No. 9184. Station no. 1214. Medium size, straw-yellow with brown hilum; heavily mottled with brown; seed coat more or less split.

97066. No. 9185. Station no. 1215. Medium small, straw-yellow with brown hilum; heavily mottled with brown.

97067. No. 9186. Station no. 1216. Medium size, straw-yellow with brown hilum.

97068. No. 9187. Station no. 1217. Medium size, straw-yellow with brown hilum; slightly mottled with brown; seed coat more or less split.

97069. No. 9188. Station no. 1218. Medium size, straw-yellow with brown hilum; mottled with brown; seed coat slightly split.

97070 to 97072. Medium size, straw-yellow, with brown hilum; slightly mottled with brown.

97070. No. 9189. Station no. 1219.

97071. No. 9190. Station no. 1220.

97072. No. 9191. Station no. 1221. Seed coat slightly split.

97073. No. 9192. Station no. 1222. Medium size, nearly round straw-yellow with brown hilum; mottled with brown.

96530 to 97251—Continued

97074. No. 9193. Station no. 1223. Medium size, straw-yellow with brown hilum; heavily mottled with brown; seed coat slightly split.

97075. No. 9194. Station no. 1224. Medium large, straw- to olive-yellow with pale hilum; mottled with brown; seed coat more or less split.

97076. No. 9195. Station no. 1225. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

97077 and 97078. Straw-yellow with brown hilum; mottled with brown.

97077. No. 9196. Station no. 1226. Medium small.

97078. No. 9197. Station no. 1227. Medium size.

97079 to 97081. Straw-yellow with brown hilum; slightly mottled with brown.

97079. No. 9198. Station no. 1228. Medium size.

97080. No. 9199. Station no. 1229. Medium size.

97081. No. 9200. Station no. 1230. Medium small.

97082. No. 9201. Station no. 1231. Medium size, straw-yellow with brown hilum; slightly mottled with brown; seed coat more or less split.

97083. No. 9202. Station no. 1232. Medium size, straw-yellow with brown hilum; mottled with brown.

97084. No. 9203. Station no. 1233. Medium size, slightly flattened, straw-yellow with brown hilum.

97085. No. 9204. Station no. 1234. Medium size, straw-yellow with brown hilum; mottled with brown.

97086. No. 9205. Station no. 1235. Medium size, light straw-yellow with brown hilum; seed coat slightly split.

97087 and 97088. Medium size, straw-yellow with light-brown hilum.

97087. No. 9206. Station no. 1236.

97088. No. 9207. Station no. 1237. Slightly mottled with brown; seed coat slightly split.

97089 and 97090. Medium size, straw-yellow with brown hilum; mottled with brown.

97089. No. 9208. Station no. 1238.

97090. No. 9209. Station no. 1239. Slightly mottled.

97091. No. 9210. Station no. 1240. Medium small, straw-yellow with brown hilum.

97092. No. 9211. Station no. 1241. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown.

97093 to 97095. Medium size, straw-yellow with brown hilum.

97093. No. 9212. Station no. 1242. Seed coat slightly split.

97094. No. 9213. Station no. 1243. Mottled with brown.

97095. No. 9214. Station no. 1244. Heavily mottled with brown.

97096 and 97097. Medium size, straw-yellow with light-brown hilum; mottled with brown.

96530 to 97251—Continued

97096. No. 9215. Station no. 1245.

97097. No. 9216. Station no. 1246. Slightly mottled.

97098 to 97100. Medium size, straw-yellow with brown hilum; mottled with brown.

97098. No. 9217. Station no. 1247. Slightly mottled and seed coat slightly split.

97099. No. 9218. Station no. 1248. Slightly mottled.

97100. No. 9219. Station no. 1249. Heavily mottled.

97101 and 97102. Straw yellow with brown hilum; slightly mottled with brown.

97101. No. 9220. Station no. 1250. Medium large.

97102. No. 9221. Station no. 1251. Medium small.

97103 and 97104. Straw-yellow with pale hilum; mottled with brown.

97103. No. 9222. Station no. 1252. Medium size, seed coat more or less split.

97104. No. 9223. Station no. 1253. Very small, slightly mottled.

97105 and 97106. Medium large, straw-yellow with light-brown hilum; mottled with brown; seed coat split.

97105. No. 9224. Station no. 1254. Heavily mottled.

97106. No. 9225. Station no. 1255. Slightly mottled.

97107. No. 9226. Station no. 1256. Medium large, nearly round, straw-yellow with dark-brown hilum; slightly mottled with dark brown; seed coat badly wrinkled and split.

97108. No. 9227. Station no. 1257. Medium large, straw-yellow with dark-brown hilum; heavily mottled with brown; seed coat badly wrinkled and split.

97109. No. 9228. Station no. 1258. Medium large, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

97110. No. 9229. Station no. 1259. Medium large, straw- to olive-yellow with pale hilum; slightly mottled with brown; seed coat more or less split.

97111 and 97112. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97111. No. 9230. Station no. 1260. Heavily mottled and seed coat badly split.

97112. No. 9231. Station no. 1261. Seed coat slightly split.

97113. No. 9232. Station no. 1262. Medium size, straw- to olive-yellow with light-brown hilum; mottled with brown.

97114. No. 9233. Station no. 1263. Medium size, straw-yellow with pale hilum; mottled with brown.

97115 and 97116. Straw-yellow with pale hilum; slightly mottled with brown.

97115. No. 9234. Station no. 1264. Medium large, seed coat slightly split.

96530 to 97251—Continued

97116. No. 9235. Station no. 1265. Medium size.

97117 and 97118. Straw-yellow with light-brown hilum; heavily mottled with brown.

97117. No. 9236. Station no. 1266. Medium large, seed coat slightly split.

97118. No. 9237. Station no. 1267. Medium size.

97119. No. 9238. Station no. 1268. Medium size, straw-yellow with pale hilum; mottled with brown.

97120. No. 9239. Station no. 1269. Medium size, straw- to olive-yellow with light-brown hilum; slightly mottled with brown, seed coat slightly split.

97121. No. 9240. Station no. 1270. Medium size, straw-yellow with dark-brown hilum; slightly mottled with brown.

97122 and 97123. Medium size, straw-yellow with pale hilum; mottled with brown.

97122. No. 9241. Station no. 1271.

97123. No. 9242. Station no. 1272. Slightly mottled and seed coat slightly split.

97124 to 97126. Medium size, straw-yellow with slate-black hilum.

97124. No. 9243. Station no. 1273.

97125. No. 9244. Station no. 1274.

97126. No. 9245. Station no. 1275.

97127. No. 9246. Station no. 1276. Medium small, straw-yellow with light-brown hilum; heavily mottled with brown.

97128 and 97129. Straw-yellow with pale hilum; heavily mottled with brown.

97128. No. 9247. Station no. 1277. Medium size.

97129. No. 9248. Station no. 1278. Medium large, seed coat badly split.

97130 and 97131. Medium large, straw-yellow with light-brown hilum; mottled with brown; seed coat split.

97130. No. 9249. Station no. 1279.

97131. No. 9250. Station no. 1280. Seed coat badly split.

97132. No. 9251. Station no. 1281. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

97133 and 97134. Medium size straw-yellow with light-brown hilum.

97133. No. 9252. Station no. 1282.

97134. No. 9253. Station no. 1283. Slightly mottled with brown.

97135. No. 9254. Station no. 1284. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

97136 to 97138. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97136. No. 9255. Station no. 1285. Seed coat slightly split.

97137. No. 9256. Station no. 1286.

97138. No. 9257. Station no. 1287.

97139 and 97140. Medium size, straw-yellow with light-brown hilum; mottled with brown.

96530 to 97251—Continued

97139. No. 9258. Station no. 1288. Slightly mottled, seed coat more or less split.

97140. No. 9259. Station no. 1289. Heavily mottled.

97141 to 97144. Medium size, straw-yellow with pale hilum; mottled with brown.

97141. No. 9260. Station no. 1290. Slightly mottled.

97142. No. 9261. Station no. 1291. Slightly mottled, seed coat slightly split.

97143. No. 9262. Station no. 1292. Slightly mottled.

97144. No. 9263. Station no. 1293. Heavily mottled, seed coat slightly split.

97145. No. 9264. Station no. 1294. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

97146 and 97147. Medium size, straw-yellow with brown hilum; heavily mottled with brown; seed coat slightly split.

97146. No. 9265. Station no. 1295.

97147. No. 9266. Station no. 1296.

97148 and 97149. Straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

97148. No. 9267. Station no. 1297. Medium size.

97149. No. 9268. Station no. 1298. Medium large.

97150. No. 9269. Station no. 1299. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97151 and 97152. Straw-yellow with brown hilum; heavily mottled with brown.

97151. No. 9270. Station no. 1300. Medium size, seed coat slightly split.

97152. No. 9271. Station no. 1301. Large size, seed coat badly split.

97153. No. 9272. Station no. 1302. Medium size, straw-yellow with pale hilum; heavily mottled with brown.

97154. No. 9273. Station no. 1303. Medium size, straw-yellow with brown hilum; mottled with brown.

97155. No. 9274. Station no. 1304. Medium large, straw-yellow with pale hilum; slightly mottled with brown; seed coat badly split.

97156 and 97157. Medium size, straw-yellow with brown hilum; mottled with brown.

97156. No. 9275. Station no. 1305. Slightly mottled.

97157. No. 9276. Station no. 1306. Heavily mottled, seed coat badly split.

97158. No. 9277. Station no. 1307. Medium large straw-yellow with pale hilum; slightly mottled with brown; seed coat badly split.

97159. No. 9278. Station no. 1308. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

97160 and 97161. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat split.

96530 to 97251—Continued

97160. No. 9279. Station no. 1309.

97161. No. 9280. Station no. 1310.

97162. No. 9281. Station no. 1311. Medium large, straw-yellow with brown hilum; heavily mottled with brown.

97163 and 97164. Straw-yellow with light-brown hilum; mottled with brown.

97163. No. 9282. Station no. 1312. Medium size.

97164. No. 9283. Station no. 1313. Medium large, seed coat slightly split.

97165. No. 9284. Station no. 1314. Medium size, straw- to olive-yellow with pale hilum; slightly mottled with brown; seed coat split.

97166 to 97168. Medium size, straw-yellow with brown hilum; heavily mottled with brown; seed coat badly split.

97166. No. 9285. Station no. 1315.

97167. No. 9286. Station no. 1316.

97168. No. 9287. Station no. 1317.

97169. No. 9288. Station no. 1318. Medium large, straw-yellow with brown hilum; heavily mottled with brown; seed coat badly split.

97170. No. 9289. Station no. 1319. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

97171 and 97172. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97171. No. 9290. Station no. 1320. Seed coat slightly split.

97172. No. 9291. Station no. 1321.

97173. No. 9292. Station no. 1322. Medium size, straw- to olive-yellow, with pale hilum; heavily mottled with brown; seed coat badly split.

97174. No. 9293. Station no. 1323. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown.

97175. No. 9294. Station no. 1324. Medium large, straw-yellow with light-brown hilum; heavily mottled with brown; seed coat badly split.

97176 to 97178. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97176. No. 9295. Station no. 1325. Seed coat badly split.

97177. No. 9296. Station no. 1326.

97178. No. 9297. Station no. 1327.

97179. No. 9298. Station no. 1328. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown; seed coat slightly split.

97180 and 97181. Medium size, straw-yellow with brown hilum; mottled with brown.

97180. No. 9299. Station no. 1329. Slightly mottled.

97181. No. 9300. Station no. 1330. Heavily mottled, seed coat badly split.

97182. No. 9301. Station no. 1331. Medium size, straw- to olive-yellow with brown hilum; heavily mottled with brown; seed coat slightly split.

96530 to 97251—Continued

97183. No. 9302. Station no. 1332. Medium large, straw-yellow with brown hilum.

97184. No. 9303. Station no. 1333. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97185. No. 9304. Station no. 1334. Medium size, straw- to olive-yellow with brown hilum; heavily mottled with brown.

97186. No. 9305. Station no. 1335. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97187 and 97188. Medium size, straw-yellow with brown hilum; mottled with brown.

97187. No. 9306. Station no. 1336.

97188. No. 9307. Station no. 1337. Heavily mottled.

97189 to 97192. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97189. No. 9308. Station no. 1338.

97190. No. 9309. Station no. 1339.

97191. No. 9310. Station no. 1340. Heavily mottled, seed coat split.

97192. No. 9311. Station no. 1341. Seed coat split.

97193. No. 9312. Station no. 1342. Medium size, straw-yellow with pale hilum; seed coat split.

97194 and 97195. Medium size, straw-yellow; slightly mottled with brown.

97194. No. 9313. Station no. 1343. Light-slate hilum.

97195. No. 9314. Station no. 1344. Pale hilum.

97196. No. 9315. Station no. 1345. Medium size, light straw-yellow with pale hilum; mottled with brown.

97197 and 97198. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97197. No. 9316. Station no. 1346.

97198. No. 9317. Station no. 1347.

97199 to 97201. Medium size, straw-yellow with pale hilum; mottled with brown.

97199. No. 9318. Station no. 1348. Seed coat split.

97200. No. 9319. Station no. 1349. Slightly mottled.

97201. No. 9320. Station no. 1350. Slightly mottled.

97202 and 97203. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97202. No. 9321. Station no. 1351.

97203. No. 9322. Station no. 1352.

97204 and 97205. Medium size, straw-yellow with light-brown hilum; mottled with brown; some purple spot.

97204. No. 9323. Station no. 1353. Slightly mottled.

97205. No. 9324. Station no. 1354. Heavily mottled.

97206 and 97207. Medium size, straw-yellow; mottled with brown.

96530 to 97251—Continued

97206. No. 9325. Station no. 1355. Light-brown hilum.

97207. No. 9326. Station no. 1356. Pale hilum.

97208 to 97211. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown.

97208. No. 9327. Station no. 1357.

97209. No. 9328. Station no. 1358.

97210. No. 9329. Station no. 1359.

97211. No. 9330. Station no. 1360.

97212. No. 9331. Station no. 1361. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

97213 and 97214. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97213. No. 9332. Station no. 1362.

97214. No. 9333. Station no. 1363.

97215. No. 9334. Station no. 1364. Medium size, straw-yellow with pale hilum; mottled with brown; seed coat slightly split.

97216 to 97218. Medium size, straw-yellow with pale hilum; slightly mottled with brown.

97216. No. 9335. Station no. 1365.

97217. No. 9336. Station no. 1366.

97218. No. 9337. Station no. 1367.

97219. No. 9338. Station no. 1368. Medium size, straw-yellow with light-brown hilum; heavily mottled with brown.

97220. No 9339. Station no. 1369. Medium small, straw- to olive-yellow with brown hilum; heavily mottled with brown.

97221 and 97222. Medium size, straw-yellow with light-brown hilum; slightly mottled with brown.

97221. No. 9340. Station no. 1370.

97222. No. 9341. Station no. 1371.

97223 to 97226. Straw-yellow with light-brown hilum; mottled with brown.

97223. No. 9342. Station no. 1372. Medium size, heavily mottled.

97224. No. 9343. Station no. 1373. Medium small.

97225. No. 9344. Station no. 1374. Medium small, heavily mottled.

97226. No. 9345. Station no. 1375. Medium size, slightly mottled.

97227. No. 9346. Station no. 1376. Medium size, nearly round, straw-yellow with pale hilum; slightly mottled with brown; seed coat badly cracked.

97228 and 97229. Medium size, straw-yellow with dark-brown hilum; heavily mottled with dark brown.

97228. No. 9347. Station no. 1377.

97229. No. 9348. Station no. 1378.

97230. No. 9349. Station no. 1379. Medium small, straw-yellow with pale hilum; slightly mottled with brown.

97231. No. 9350. Station no. 1380. Medium size, straw-yellow with brown hilum; seed coat slightly cracked around hilum.

96530 to 97251—Continued

97232 to 97234. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97232. No. 9351. Station no. 1381. Heavily mottled.

97233. No. 9352. Station no. 1382. Heavily mottled.

97234. No. 9353. Station no. 1383.

97235 to 97243. Medium size, straw-yellow with brown hilum; heavily mottled with brown.

97235. No. 9354. Station no. 1384. Affected with purple spot.

97236. No. 9355. Station no. 1385. Seed coat split.

97237. No. 9356. Station no. 1386.

97238. No. 9357. Station no. 1387. Seed coat badly split.

97239. No. 9358. Station no. 1388.

97240. No. 9359. Station no. 1389.

97241. No. 9360. Station no. 1390.

97242. No. 9361. Station no. 1391.

97243. No. 9362. Station no. 1392. Some purple spot.

97244. No. 9363. Station no. 1393. Medium size, straw-yellow with brown hilum; slightly mottled with brown.

97245. No. 9364. Station no. 1394. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97246. No. 9365. Station no. 1395. Medium size, straw- to olive-yellow with pale hilum; mottled with brown; seed coat slightly split.

97247 to 97251. Medium size, straw-yellow with light-brown hilum; mottled with brown.

97247. No. 9366. Station no. 1396. Heavily mottled.

97248. No. 9367. Station no. 1397. Heavily mottled.

97249. No. 9368. Station no. 1398. Slightly mottled, seed coat slightly split.

97250. No. 9369. Station no. 1399. Seed coat badly split.

97251. No. 9370. Station no. 1400. Slightly mottled.

97252. CYPHOMANDRA BETACEA (Cav.) Sendt. Solanaceae. **Tree-tomato.**

From New Zealand. Seeds presented by Dr. O. Earp Thomas, Wellington. Received February 9, 1932.

A sport of a black variety of the tree-tomato, which becomes 6 feet high. The entire leaves have a disagreeable odor if touched, and the violet-colored tomatolike flowers are followed by oval blue-black fruits over 2 inches long. The fruit ripens in the winter where frosts are not severe and is superior to the ordinary variety.

97253. PRUNUS DOMESTICA L. Amygdalaceae. **Common plum.**

From Chevy Chase, Md. Scions presented by A. Hrdlička, United States National Museum. Received February 9, 1932.

This prune, received from Czechoslovakia by Dr. Hrdlička, appears very similar to

97253—Continued

the French prune in character of fruit, but the latter does not succeed in the climate of Washington, whereas Dr. Hrdlička's tree bears well annually, and the fruit seems almost immune from the attacks of curculio and other pests. The ripening season is September and October.

For previous introduction see 91792.

97254. PUERARIA COLLETTII Prain (*P. siamica* Craib). Fabaceae.

From Siam. Seeds presented by Dr. H. S. Smith, Department of Fisheries, Ministry of Lands and Agriculture, Bangkok. Received February 11, 1932.

A more or less shrubby tropical perennial 5 or 6 feet high, with leaves composed of thick velvety pubescent leaflets, and purplish flowers 4 inches long in axillary racemes. Native to Upper Burma.

97255. ASYSTASIA GANGETICA (L.) T. Anders. Acanthaceae.

From British Guiana. Seeds presented by J. S. Dash, director, Botanic Gardens, Georgetown. Received February 11, 1932.

A zigzag subshrub 1 to 4 feet tall, native to India. The cordate to ovate leaves are 1 to 4 inches long, and the yellow, dingy-white or dark-violet flowers are narrow below and inflated above.

For previous introduction see 87139.

97256 and 97257.

From India. Seeds presented by W. Koelz, Himalayan Research Institute, Nagar, Kulu, Punjab. Received February 11, 1932.

97256. CITRUS LIMONIA Osbeck. Rutaceae. **Lemon.**

A thick-skinned lemon collected at Taklesh, Rampur.

97257. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

97258. ZELKOVA FORMOSANA Hayata. Ulmaceae.

From Japan. Seeds presented by F. Seki, director, Government Research Institute, Department of Forestry, Taihoku, Taiwan. Received February 12, 1932.

Collected in the Sinchiku Prefecture, Taiwan. This resembles *Zelkova acuminata*, differing chiefly in the shape of the achenes, which have less prominent margins. It is a somewhat elmlike tree with leathery narrow leaves of variable shape, up to 4 inches long. Native to Taiwan.

97259. ORYZA LATIFOLIA Desv. Poaceae. **Rice.**

From Cuba. Seeds presented by Dr. D. L. Van Dine, local director, Tropical Plant Research Foundation, Central Baraguá, Baraguá. Received February 10, 1932.

Collected November 20, 1931, at Ingenio Jababo, Oriente Province.

For previous introduction and description see 95596.

97260 to 97265.

From the West Indies. Scions collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant In-

97260 to 97265—Continued

dustry, with the 1931–32 Allison V. Armour expedition. Received February 8, 1932.

From the Dominica Botanic Garden, Dominica, Leeward Islands. Presented by F. G. Harcourt, agricultural curator and superintendent, Agricultural Department, January 29, 1932.

97260 to 97264. CITRUS spp. Rutaceae.

97260. CITRUS AURANTIUM L. **Seville orange.**

No. 2714.

97261 to 97264. CITRUS AURANTIFOLIA (Christm.) Swingle. **Lime.**

97261. No. 2708. *Harcourt Hybrid No. 29.* A cross between the *Woglum* lime (F.P.I. 29110), which Mr. Woglum sent from India in 1910, and the *West Indian* lime. The hybrid is resistant to witchertip and yet retains the superficial character of the *West Indian* lime.

97262. No. 2709. *Harcourt Hybrid No. 42.* This hybrid is larger than No. 2708 (97261), has the shape of a lemon and has the flavor of a lime. From the lime-breeding station, Rossau Valley, Dominica.

97263. No. 2712. A hybrid lime, a cross between the *West Indian* lime and *Citrus aurantifolia.*

97264. No. 2713. A hybrid between the *Woglum* lime and the *West Indian* lime. It is shaped like the *Woglum,* but is smaller and has the flavor of a lime.

97265. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

No. 2710. Said to be the wild mango from India. May prove of value as a stock.

97266 to 97279.

From France. Plants purchased from E. Turbat & Cie., Orleans. Received February 10, 1932.

97266. BERCHEMIA LINEATA (L.) DC. Rhamnaceae. **Supplejack.**

A diffuse shrub with somewhat twining branches, native to China. The broadly orbicular leaves are 1 inch long, and the small flowers, in clusters of two or three in the axils of the leaves at the ends of the branches, are followed by fleshy ovoid blue fruits one quarter inch long.

97267. BERCHEMIA RACEMOSA Sieb. and Zucc. Rhamnaceae. **Japanese supplejack.**

A deciduous twining shrub with ovate leaves 1 to 3 inches long and large terminal panicles of greenish flowers followed by small ellipsoidal berries which at first are red and later change to black. It is native to Japan.

For previous introduction see 86875.

97268. BIGNONIA sp. Bignoniaceae. **Trumpetcreeper.**

Mme. Gallen. A form with salmon-red flowers.

97269 to 97276. CEANOTHUS sp. Rhamnaceae.

97269. *Albert Pittet.* A variety with pink flowers.

97266 to 97279—Continued

97270. *Charles Detriche.* A variety with dark-blue flowers.

97271. *Gladiateur.*

97272. *Indigo.* A variety with indigo-blue flowers.

97273. *Perle Rose.* A variety with nice carmine-rose flowers.

97274. *Ringuet-Guindon.*

97275. *Richesse.* A variety with pure rose flowers.

97276. *Roseus carmineus.* A variety with carmine-pink flowers.

97277. LIGUSTRUM CHENAULTII. Hickel. Oleaceae. **Privet.**

A deciduous shrub or small tree, closely related to *L. compactum,* native to southwestern China. The branchlets have conspicuous white lenticels, the lanceolate leaves are about 1 foot long, and the small white flowers are followed by bluish-black fruits.

97278. LIGUSTRUM JAPONICUM Thunb. Oleaceae. **Japanese privet.**

Mme. H. Lemoine.

97279. PHILADELPHUS LEMOINEI Lemoine. Hydrangeaceae. **Lemoine mockorange.**

Coup d'Argent.

97280 to 97291.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 8, 1932.

97280 to 97290. Phoenicaceae. **Palm.**

97280. BACTRIS PAVONIANA Mart.

No. 2648. Collected January 26, 1932, in Blubber Valley, Antigua, Leeward Islands. A beautiful palm, 50 feet tall, with feathery leaves more striking than those of the Royal palm. The trunks of old trees are smooth, but those of young trees are covered with bands of black spines which later fall off. The leaves are also armed with black spines. The fruit is as large as a walnut. This is apparently an almost extinct species. Blubber Valley is the only place where it is found.

97281. BENTINCKIA NICOBARICA (Kurz) Beccari.

No. 2707. Collected January 29, 1932, in the Botanic Garden, Dominica, Leeward Islands. A very tall slender feather palm, 60 to 70 feet high and only 9 inches in diameter at the base. Native to Nicobar Islands, India.

97282. RHYTICOCCOS AMARA (Jacq.) Beccari.

No. 2702. Collected in the Botanic Garden, Dominica, January 29, 1932. A tall slender, perfectly straight, feather palm 50 feet high with leaves 15 feet long. The golden-yellow fruits, 2 inches long by 1½ inches wide, are covered with a pulp filled with long fibers. This pulp ferments easily and develops butric acid. The seed is large and of the characteristic coconut shape.

97280 to 97291—Continued

97283. COCCOTHRINAX sp.

No. 2597. Collected January 15, 1932, at Great Inagua, Bahamas.

97284. EUTERPE EDULIS Mart. **Para palm.**

No. 2703. Collected January 28, 1932, in the Botanic Garden, Dominica. A palm, native to Brazil, 40 feet high, with a slender inclined trunk, pinnate leaves, and fruits the size of marbles. A nutritious beverage is made by the natives from the fibrous flesh surrounding the seeds.

For previous introduction see 79539.

97285. EUTERPE sp.

No. 2711. Collected February 2, 1932, at Bar de l'Isle, St. Lucia, Windward Islands. A slender undergrowth palm, 30 to 40 feet tall and 3 inches in diameter. The pinnae are long and delicate, and the rachis and petiole are dark reddish green. The inflorescence varies from nearly white to cerise; the fruit is shining black.

97286. ROYSTONEA OLERACEA (Jacq). O. F. Cook.

No. 2676. Collected January 31, 1932, at Mount Joy, Dominica, the home of Stephen Haweis. The great *Royal* palm of South America, also called the *cabbage* palm. It grows to a height of 130 feet, with a diameter of 2½ feet, and is a far statelier palm than *R. regia*, which is usually grown in Florida. There is a question as to whether this glorious palm is really in culture in Florida; what goes under this name may be a hybrid of the two species.

97287. PINANGA KUHLII Blume.

No. 2677. From the Botanic Garden, Dominica, January 29, 1932. A stout rapid-growing palm native to the lower altitudes of western Java, becoming 16 to 25 feet high with annulate stems 2 inches in diameter, reddish when young, and beautiful terminal fronds with pinnate blades 4 feet long and half as wide. This is one of the hardiest species of Pinanga known.

For previous introduction see 81689.

97288. PTYCHOSPERMA MACARTHURI Wendl.

No. 2678. Collected in the Botanic Garden, Dominica, January 29, 1932. A palm, native to Australia, which grows to a height of 30 feet, but is usually a dwarf in cultivation with suckers from the base, making a bushy plant. The smooth-ringed trunk is crowned by a dense cluster of pinnate leaves with arching leaflets 6 to 9 inches long.

For previous introduction see 93417.

97289. SABAL GLABRA (Mill.) Sarg. (*S. adansoni* Guerns.). **Bluestem palmetto.**

No. 2671. From the Botanic Garden, Dominica, January 28, 1932. An attractive palm 30 feet high. The smooth tapering trunk is marked at regular intervals with scars.

97290. SABAL GLAUCESCENS Lodd. **Palmetto.**

No. 2670. Collected January 26, 1932, in the Botanic Garden, Antigua, Leeward Islands. A handsome palm 40 to 50 feet high with fan-shaped leaves 5 to 7 feet in diameter on petioles 8 feet long.

For previous introduction see 66238.

97291. MAYTENUS REYNOSIOIDES Urb. Celastraceae.

No. 2613. Collected January 18, 1932, on dry rocks on Beata Island, Dominican Republic. A shrub 10 to 15 feet high with stout branches and spirally alternate obovate leaves one third inch long. The small brownish flowers, solitary in the axils, are followed by orange fruits one fourth inch in diameter which open upon drying and show an attractive glistening white arillus.

97292 to 97296. Aizoaceae.

From Africa. Seeds presented by C. Starke & Co., Ltd., Mowbray, Cape Town, through Mrs. C. I. DeBevoise, Greens Farms, Conn. Received February 11, 1932.

97292. GLOTTIPHYLLUM DEPRESSUM (Haw.) N. E. Brown (*Mesembryanthemum depressum* Haw.). **Figmarigold.**

A stemless prostrate succulent, native to southern Africa, with narrow tongue-shaped, recurved-depressed acute leaves, and yellow flowers with petals somewhat recurved.

For previous introduction see 79484.

97293. GLOTTIPHYLLUM sp.

97294. HEREROA STANLEYII Hort.

A name for which a place of publication and a description have not been found. A trade catalog describes it as producing an abundance of yellow flowers.

97295. PUNCTILLARIA MAGNIFIPUNCTATA N. E. Brown.

A plant forming clumps of 3 to 4 inches high. The leaves, normally in one or two pairs, are very stout, ascending-spreading, 1 to 3 inches long and up to an inch thick at the base, enlarging above, nearly flat on the face, convex, and bluntly keeled on the back. Native to the Karoo region of southern Africa.

97296. PUNCTILLARIA NOBILE Hort.

A name for which a place of publication and a description have not been found. A trade catalog describes it as a handsome stemless succulent with large bright-yellow flowers.

97297 to 97302.

From Africa. Scions presented by J. B. Plessis, Chef du Jardin d'Essais, Sfax, Tunisia. Received February 11, 1932.

97297. CERATONIA SILIQUA L. Caesalpiniaceae. **Carob.**

97298 to 97301. MALUS spp. Malaceae. **Apple.**

97298. MALUS sp.

Aigre.

97299. MALUS sp.

Halou (Douce).

97300. MALUS sp.

Meski.

97297 to 97302—Continued

97301. MALUS sp.

Mesteri (de Monaster).

97302. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Amor Leuch.

97303 to 97305. PISTACIA spp. Anacardiaceae.

From Palestine. Seeds presented by the Jewish Colonization Association, Haifa, at the request of Prof. R. W. Hodgson, University of California. Received February 2, 1932.

97303. PISTACIA LENTISCUS L. **Lentisk.**

A wild shrub common in the Mediterranean regions where it grows on poor soil and withstands severe drought. It produces a gum used by the Arabs as a perfume; and an edible oil known as shinia, used as a substitute for olive oil, is obtained from the berries.

For previous introduction see 54694.

97304. PISTACIA MUTICA Fisch. and Mey. **Terebinth.**

A deciduous tree up to 35 feet high, with pinnate foliage. It is sometimes used as a stock for *Pistacia vera*. Native to the eastern Mediterranean region.

For previous introduction see 81355.

97305. PISTACIA TEREBINTHUS PALESTINA (Boiss.) Engl.

A small tree or bush from 4 to 6 feet high, which grows in limestone soil up to 2,000 feet altitude in the eastern Mediterranean region. It is used as a stock on which to graft the better varieties of cultivated pistache.

For previous introduction see 95068.

97306 to 97316.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 2, 1932.

97306. BRADBURYA VIRGINIANA (L.) Kuntze (*Centrosema virginianum* Benth.). Fabaceae. **Piedmont butterfly-pea.**

No. 2594. Collected on Spanish Wells Island, Bahamas, January 10, 1932. A long-podded vigorous legume found climbing over bushes, similar to the rice bean.

97307. COLUMBRINA FERRUGINOSA Brongn. Rhamnaceae.

No. 20. Collected on Rum Key, Bahamas, January 7, 1932. A low tree with rusty tomentose branchlets, ovate to oblong entire leaves 6 inches long, yellowish-green flowers in umbellike clusters, and small black fruits with shining black seeds. It is native to the West Indies.

For previous introduction see 90909.

97308. CROTALARIA PUMILA Orteg. Fabaceae.

No. 2588. Collected January 11, 1932, at Gun Point, Eleuthera Island, Bahamas. A low-spreading vigorous shrub with yellow flowers, found growing wild in cleared spaces.

97306 to 97316—Continued

97309. DATURA CHLORANTHA Hook. Solanaceae.

No. 2587. Collected January 11, 1932, on Spanish Wells Island, Bahamas. A small tree or bush with very fragrant double yellow flowers, followed by pods covered with blunt spines.

97310 and 97311. DOLICHOLUS MINIMUS (L.) Medic. Fabaceae.

A legume which may have value as a green manure.

97310. No. 2615. Collected January 18, 1932, on the wind-swept side of Beata Island, Dominican Republic.

97311. No. 11. Collected January 4, 1932, on Cat Island, Bahamas.

97312. GALACTIA SPICIFORMIS Torr. and Gray. Fabaceae.

No. 2593. Collected January 11, 1932, at Gun Point, Eleuthera Island, Bahamas. A wild species with blue flowers found growing over stumps and scrub in the hammock at Gun Point.

97313. GALACTIA sp. Fabaceae.

No. 25. Collected January 15, 1932, on Salt Pond Hill, Great Inagua, Bahamas. A strong growing vine with pink-purple flowers.

97314. MIMOSA BAHAMENSIS Benth. Mimosaceae.

No. 21. Collected on Rum Key, Bahamas, January 7, 1932. An ornamental shrub or small tree with very small compound leaves and numerous thin red-brown seed pods about one-half inch wide and 2 to 3 inches long.

97315. PHASEOLUS LATHYROIDES L. Fabaceae.

No. 28. Collected January 15, 1932 on Salt Pond Hill, Great Inagua, Bahamas. A legume with brown-red flowers.

97316. JACQUINIA ARMILLARIS Jacq. Theophrastaceae.

No. 2623. Collected on Saona Island, Dominican Republic, January 20, 1932. A tree growing near the coast with a trunk mottled gray and dark brown. The large thick coriaceous leaves are light green, and the spikes of fragrant white flowers scent the air with a delicate perfume.

97317 to 97323.

From Mexico and Chile. Seeds collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received February 13, 1932.

Nos. 97313 to 97320 were bought in the market at Santiago, Chile, January 11, 1932.

97317. CITRULLUS VULGARIS Schrad. Cucurbitaceae. **Watermelon.**

No. 6. *Sandia del Pais.* A round melon with green skin; said to be a native variety.

97318. CUCUMIS MELO L. Cucurbitaceae. **Melon.**

No. 7. *Melon del Pais.* Said to be a native variety.

97319. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

No. 4.

97317 to 97323—Continued

97320. LENS ESCULENTA Moench. Fabaceae. **Lentil.**

No. 5. A larger type than No. 4.

97321. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 1. From Acapulco, Mexico, December 17, 1931. A small round red tomato, 1½ to 2 inches in diameter; bought in the market.

97322 and 97323. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

Bought in the market at Santiago, Chile, January 11, 1932.

97322. No. 2. A tan-colored bean.

97323. No. 3. A gray bean.

97324 to 97329.

From China. Seeds collected by the Forrest expedition, 1930–32, to southwestern China and presented by Maj. Lionel de Rothschild, London, England. Received February 13, 1932.

97324. LITSEA sp. Magnoliaceae.

No. 29966.

97325. LITSEA sp. Magnoliaceae.

No. 29970.

97326. MANGLIETIA FORRESTII W. W. Smith. Magnoliaceae.

No. 30430. A tree sometimes 50 feet high, with rather stiff oblong-lanceolate acuminate leaves about 9 inches long and fragrant white flowers with nine or ten oblong sepals 2 to 3 inches long. Native to Yunnan, China. This *Manglietia* is closely allied to *M. fordiana*, a species from southeastern China.

97327. QUERCUS sp. Fagaceae. **Oak.**

No. 30404.

97328 and 97329. THEA FORRESTII **Diels.** Theaceae.

For previous introduction and description see 95560.

97328. No. 29721.

97329. No. 29721–a.

97330 to 97332. HORDEUM VULGARE COELESTE L. Poaceae. **Six-rowed barley.**

From Japan. Seeds presented by T. Mizuuchi, director, Agricultural Experiment Station, Fukuoka. Received February 15, 1932.

Motimugi (*Dagomugi*). A collection of barley with waxy endosperm, introduced for the use of Department specialists.

97330. No. 1. Purple seed.

97331. No. 2. Purple seed.

97332. No. 3. White seed.

97333. (Undetermined.)

From Africa. Seeds presented by W. L. Thompson, M. D., Mount Silinda, Southern Rhodesia. Received February 10, 1932.

Purchased in the market at Victoria, Southern Rhodesia. A fruit which consists of small nuts growing on a coblike receptacle, like kernels of corn on a cob.

97334. SEVERINIA BUXIFOLIA (Poir.) Ten. (*Atalantia buxifolia* Oliver). Rutaceae.

From China. Seeds presented by G. Weidman Groff, Lingnan University, Canton. Received February 15, 1932.

No. 69. Collected January 11, 1932, near Pakhoi.

For previous introduction and description see 96477.

97335 to 97338. ANANAS spp. Bromeliaceae. **Pineapple.**

From Brazil. Plants presented by F. C. Camargo, Estacão de Pomicultura de Deodoro, Rio de Janeiro. Received February 15, 1932.

97335. ANANAS SATIVUS BRACTEATUS (Lindl.) Mez.

No. 29/31. A wild pineapple, very abundant in the eastern part of Brazil. The fruits are cylindrical, about 4 inches in diameter and 6 inches long.

97336 to 97338. ANANAS SATIVUS Schult. f.

97336. No. 11/31. *Microcephalus.* From São Paulo. A dwarf form with small unpalatable fruits.

97337. No. 214/31. *Luiz Carceres.* From São Paulo.

97338. No. 114/31. *Moura.* From Matto Grosso.

97339. SOJA MAX (L.) Piper (*Glycine hispida* Maxim.). Fabaceae. **Soybean.**

From Japan. Seed presented by Ishimitsa & Co., Kobe, through Tsutakawa & Co., Seattle, Wash. Received February 16, 1932.

Daizu.

97340 to 97346. PRUNUS DOMESTICA L. Amygdalaceae. **Common plum.**

From Germany. Scions presented by C. F. Rudloff, Kaiser Wilhelm Institut, Münchebe-g. Received March 11, 1930. Numbered in February 1932.

97340. No. 39. *Jaurus.*

97341. No. 41. *Adana.*

97342. No. 46. *Adana.*

97343. No. 55. *Adabayar.*

97344. No. 61. *Arifil.*

97345. No. 62. *Arifil.*

97346. No. 63. *Arifil.*

97347 to 97353. PYRUS spp. Malaceae. **Pear.**

From Japan. Scions collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Received March 12, 1930. Numbered in February 1932.

97347. PYRUS sp.

No. 4120. *Chojuro.* A midseason variety received February 15, 1930, from the Agricultural Experiment Station, Tachikawa, Tokyo.

97348. PYRUS sp.

No. 4108. *Meigetsu.* Received February 14, 1930, from the Saitama Ken Agricultural Experiment Station.

97347 to 97353—Continued

97349. PYRUS sp.

No. 4344. *Meigetsu.* A Japanese pear received from the Horticultural Institution, Department of Agriculture, Kyoto Imperial University, Kyoto, February 24, 1930.

97350. PYRUS sp.

No. 4112. *Okusankichi.* Received February 14, 1930 from the Saitama Ken Agricultural Experiment Station.

97351. PYRUS sp.

No. 4118. *Shinchu.* An early variety received February 15, 1930, from the Agricultural Experiment Station, Tachikawa, Tokyo.

97352. PYRUS sp.

No. 4106. *Waseaka.* Received February 14, 1930, from the Saitama Ken Agricultural Experiment Station.

97353. PYRUS sp.

No. 4119. *Waseaka.* Received February 14, 1930, from the Agricultural Experiment Station, Tachikawa, Tokyo. A midseason variety.

97354 to 97374. SOLANUM TUBEROSUM L. Solanaceae. **Potato.**

From the Union of Soviet Socialist Republics. Tubers presented by the Institute of Plant Industry, Leningrad. Received February 16, 1932.

A collection of potatoes developed by Dr. V. P. Alekseev, plant introducer, Sukhum Subtropical Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus.

97354. No. 8.
97355. No. 10.
97356. No. 25.
97357. No. 53.
97358. No. 60.
97359. No. 62.
97360. No. 66.
97361. No. 78.
97362. No. 81.
97363. No. 83.
97364. No. 85.
97365. No. 89.
97366. No. 91.
97367. No. 108.
97368. No. 111.
97369. No. 114.
97370. No. 140.
97371. No. 159.
97372. No. 161.
97373. No. 172.
97374. No. 219.

97375 to 97413. RHODODENDRON spp. Ericaceae.

From North Wales. Seeds presented by Henry McLaren, Bodnant, Tal-y-Cafn. Received February 17, 1932.

97375 and 97376. RHODODENDRON ARBOREUM J. E. Smith. **Tree rhododendron.**

97375. *Sir Charles Lemon.*

97376. *Mrs. Henry Shilson.*

97377. RHODODENDRON ARBOREUM × GRIFFITHIANUM.

Beauty of Tremough.

97378. RHODODENDRON ARBOREUM × THOMSONII.

Harrisii.

97379. RHODODENDRON AUGUSTINII Hemsl.

An evergreen shrub up to 4 feet high, native to Hupeh, China. The lanceolate to broadly oblanceolate leaves are 3 inches long, and the lilac-purple flowers with yellow-green spots are 2 to 3 inches across.

97380. RHODODENDRON BAILEYI Balf. f.

A small shrub up to 3 feet high, native to southern Tibet. The obovate leaves 1 to 2 inches long are closely scaly above and are very densely covered beneath with overlapping cinnamon scales. The short broad flowers, one half inch long, are red-purple with darker spots on the three upper petals and are borne in terminal racemose clusters containing up to 14 flowers.

97381. RHODODENDRON BARBATUM × THOMSONII.

Shilsonii.

97382. RHODODENDRON CALLIMORPHUM Balf. and Smith.

A shrub 4 to 9 feet high, native to western Yunnan, China. The thin leathery leaves 1 to 2 inches long are elliptic to broadly ovate and are dark green above and glaucous below. The soft-rose flowers in terminal umbels of 5 to 8 are openly campanulate, and the base of the tube is somewhat pouched and is marked on the inside with a crimson blotch.

97383. RHODODENDRON CALOPHYTUM Franch.

A shrub or tree from 15 to 50 feet high, native to western Szechwan, China. The bright-green leathery leaves are 8 to 12 inches long, and the rosy-white to red flowers, 2 to 3 inches long, are borne in loose racemose clusters of up to 30.

97384. RHODODENDRON CALOSTROTUM Balf. and Ward.

A low shrub 1 foot high, native to southern Burma. The obovate leaves 1 inch long are densely covered above with greenish scales, and the lower surface is pale red with numerous flaky scales. The widely funnel-shaped flowers, 1 inch long, are bright red purple and are borne in pairs at the ends of the branchlets.

97385. RHODODENDRON CAMPYLOCARPUM × GRIFFITHIANUM.

Penjerrick.

97386. RHODODENDRON CAMPYLOGYNUM Franch.

A shrub up to 6 feet high, native to western Yunnan, China. The thick obovate leaves are an inch in length, and the widely companulate rose-purple to almost black-purple flowers, 1 inch long, are borne in terminal clusters of one to three.

97387. RHODODENDRON CHARITOPES Balf. and Farrer.

A low shrub 1 foot high, native to Upper Burma, India. The obovate, bluntly mucronate leaves, 1 to 2 inches long, are glabrous above and glaucous and densely scaly beneath. The broadly tubular flowers, 1 inch long, are clear apple-blossom pink speckled with crimson and are borne in threes at the ends of the branchlets.

97388. RHODODENDRON CHARTOPHYLLUM Franch.

Variety *praecox.* A form in which the leaves are completely deciduous.

97375 to 97413—Continued

97389. RHODODENDRON CILIATUM Hook. f. **Fringed rhododendron.**

A Himalayan rhododendron of somewhat dwarf habit, bearing many small loose trusses of pink-white flowers less than 3 inches wide. It rarely exceeds 6 feet in height.

For previous introduction see 68343.

97390. RHODODENDRON CUNEATUM W. W. Smith.

A small shrub 4 feet high with elliptical-oval leaves, silky brown beneath, and deep lavender flowers.

For previous introduction see 59254.

97391. RHODODENDRON DAVIDSONIANUM Rehd. and Wils. **Davidson rhododendron.**

A shrub up to 10 feet high, native to western China, with semi-evergreen oblong leaves 1 to 3 inches long, glaucous beneath, and terminal and axillary clusters of lavender-pink flowers an inch across, somewhat resembling those of the nearly related *R. mucronulatum*.

For previous introduction see 78329.

97392. RHODODENDRON EDGEWORTHII Hook. f.

A shrub often epiphytic, 4 to 6 feet high, native to the Himalayas in Sikkim, India. The elliptic-ovate leaves, 4 inches long, are strongly bullate above and densely cobwebby tomentose beneath. The fragrant white or pink-tinged flowers are broadly tubular and 3 to 4 inches long.

97393. RHODODENDRON FORTUNEI Lindl.

A shrub 10 to 12 feet high, native to Chekiang, China. The oblong-elliptic leaves, 3 to 10 inches long, are dark green above and pale glaucous green beneath. The inflorescence is a loosely racemose umbel of 6 to 12 funnel-campanulate, pale-rose flowers 3 to 4 inches across.

97394. RHODODENDRON HIPPOPHAEOIDES Balf. and Smith.

A shrub 3 feet high which grows in swampy meadows. The small elliptical-elongate leaves are pale yellow beneath, and the flowers are rich lavender blue.

For previous introduction see 59615.

97395. RHODODENDRON INSIGNE Hemsl. and Wils.

A shrub 5 to 12 feet high, native to Szechwan, China. The leathery oblong to oblanceolate leaves, 3 to 6 inches long, are glabrous and dark green above and are covered beneath with a shining tawny-gray tomentum that has a coppery sheen. The flowers, a cluster of eight or more in a short lax corymb, are widely campanulate, 2 inches long, and various shades of pink with crimson spots on the inside.

97396. RHODODENDRON LODERI Millais.

King George. A hybrid between *R. fortunei* and *R. griffithianum*.

97397. RHODODENDRON MADDENI Hook. f.

A shrub 6 to 8 feet high with red-stemmed dark-green leaves. The large delicately fragrant flowers, tinged with rose, are produced in threes at the ends of the branches. Native to the Himalayas.

For previous introduction see 68345.

97398. RHODODENDRON MOLLICOMUM Balf. and Smith.

A small shrub with softly pubescent branchlets native to Yunnan, China. The narrowly lanceolate leaves, 1 inch long, are softly pubescent on both surfaces and are also scaly beneath. The narrowly tubular crimson flowers, pubescent outside, are in axillary pairs crowded near the ends of the branchlets.

97399. RHODODENDRON ORBICULARE Decaisne.

A much-branched shrub 6 to 9 feet high and 10 to 13 feet broad, native to Szechwan, China. The orbicular leaves are cordate-auriculate at the base with the lobes overlapping and are bright green above and glaucous-papillate beneath. The rosy campanulate flowers, 2 to 3 inches long, are borne in a loose corymb of 7 to 10.

97400. RHODODENDRON RACEMOSUM Franch. **Mayflower rhododendron.**

An upright Chinese shrub up to 6 feet high, with scaly branchlets, elliptic to obovate leaves which are glabrous above and glaucous beneath, and few-flowered clusters of pink flowers, so abundantly produced as to completely cover the plant.

For previous introduction see 86761.

97401. RHODODENDRON RETICULATUM D. Don.

For previous introduction and description see 96525.

97402. RHODODENDRON ROYLEI Hook. f. (*R. cinnabarinum* Hook. f.).

The flowers of this evergreen shrub, produced in terminal heads, are usually a dull cinnabar red, but in some forms the corolla is orange red on the outside and yellowish within. It is native to the mountainous region of Sikkim and Bhutan, India.

For previous introduction see 58928.

97403. RHODODENDRON SOULIEI Franch.

A shrub 6 to 12 feet high, native to western Szechwan, China. The leathery leaves are broadly ovate to orbicular, 2 to 4 inches long, dark green above and light glaucous green beneath. The saucer-shaped, white to deep-rose flowers, 2 inches across, are borne in racemose umbels of five to eight.

97404. RHODODENDRON SPINULIFERUM × RACEMOSUM.

Spinulosum.

97405. RHODODENDRON STRIGILLOSUM Franch.

A shrub 8 to 20 feet high, native to Szechwan, China. The oblanceolate leaves, 3 to 6 inches long, are bright green and smooth above and clothed beneath with scattered crisped hairs, except the prominent midrib, which is covered with loose tawny tomentum. The fleshy tubular-campanulate, deep-red flowers, 8 to 12 in an umbel, are nearly 2 inches long and 2 inches across.

97375 to 97413—Continued

97406. RHODODENDRON SUTCHUENENSE Franch.

A shrub 3 to 10 feet high, native to southwestern China. The narrowly elliptical to oblanceolate leaves, 4 to 10 inches long, are smooth and dark green above and pale and smooth beneath except the midrib, which is covered with a loose woolly tomentum. The widely campanulate flowers, 2 to 3 inches long, are rose pink, spotted deeper rose inside, and are borne in a dense corymbose raceme.

97407. RHODODENDRON THOMSONII × FORTUNEI.

97408. RHODODENDRON THOMSONII × GRIFFITHIANUM.

Cornish Cross.

97409. RHODODENDRON WASONII Hemsl. and Wils. (*R. rhododactylum.* Hort.).

A shrub 4 feet high, native to western Szechwan, China. The ovate leaves, 2 to 4 inches long, are dark glossy green above and are clothed beneath with a uniform scurfy felt which is white on the young leaves, but turns later to a bright brown or rusty red. The funnel-campanulate flowers, 2 inches long, are pinkish in this form, but are creamy yellow in the typical form.

97410. RHODODENDRON WILLIAMSIANUM Rehd. and Wils.

A shrub 3 to 5 feet high with horizontal branches, native to Szechwan, China. The leathery cordate leaves, 2 inches long, are bright green above, and the lower surface is glaucous, papillate, and punctulate with small glands and hairs. The three to five campanulate flowers, 2 inches long, are pale rose without spots.

97411. RHODODENDRON YUNNANENSE Franch. **Yunnan rhododendron.**

A low shrub, 6 feet or less high with narrowly elliptic, somewhat hairy leaves, and few-flowered clusters of broadly funnel-shaped flowers, white with the upper lobes spotted blood red. Native to Yunnan, China.

For previous introduction see 94131.

97412. RHODODENDRON sp.

Carylons Cross.

97413. RHODODENDRON sp.

Related to *R. mollicomum.*

97414 to 97422. ZEA MAYS L. Poaceae. **Corn.**

From Australia. Seeds presented by Dr. H. Wenholz, director of plant breeding, Department of Agriculture, Sydney, New South Wales. Received February 18, 1932.

A collection of *Fitzroy* corn from the Grafton Experiment Station, New South Wales, introduced for the use of Department specialists.

97414. No. 368-a-1-2-1-1.

97415. No. 368-a-1-2-1-2.

97416. No. 368-a-1-2-1-8.

97417. No. 200-b-3-1-1.

97418. No. 372-a-1-1-1-5.

97419. Line C.

97420. Line E.

97414 to 97422—Continued

97421. Line 200-b-5-1-1.

97422. Line 200-b-1-1-3.

97423 to 97490. PRUNUS spp. Amygdalaceae.

From the Union of Soviet Socialist Republics. Seeds presented by V. P. Alekseev, plant introducer, Sukhum Subtropical Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus. Received February 18, 1932.

Collected from various parts of the Caucasus region. Introduced for the use of Department specialists.

97423 to 97485. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. **Plum.**

F.P.I. No.	Leningrad No.	F.P.I. No.	Leningrad No.
97423.	10970.	**97455.**	37321.
97424.	31339.	**97456.**	37328.
97425.	31342.	**97457.**	37329.
97426.	31345.	**97458.**	37330.
97427.	37246.	**97459.**	37335.
97428.	37247.	**97460.**	37339.
97429.	37248.	**97461.**	37340.
97430.	37249.	**97462.**	37341.
97431.	37250.	**97463.**	37342.
97432.	37251.	**97464.**	37343.
97433.	37254.	**97465.**	37344
97434.	37255.	**97466.**	37345.
97435.	37256.	**97467.**	37353.
97436.	37257.	**97468.**	37357.
97437.	37262.	**97469.**	37358.
97438.	37263.	**97470.**	37369.
97439.	37266.	**97471.**	37370.
97440.	37268.	**97472.**	37383.
97441.	37272.	**97473.**	37384
97442.	37295.	**97474.**	37394.
97443.	37296.	**97475.**	37397.
97444.	37297.	**97476.**	37399.
97445.	37298.	**97477.**	37400.
97446.	37299.	**97478.**	37404.
97447.	37300.	**97479.**	37410.
97448.	37301.	**97480.**	37412.
97449.	37302.	**97481.**	37434.
97450.	37303.	**97482.**	37435.
97451.	37304.	**97483.**	37436.
97452.	37305.	**97484.**	37438.
97453.	37319.	**97485.**	37439.
97454.	37320.		

97486. PRUNUS DOMESTICA × ARMENIACA.

No. 37797. A natural hybrid of the prune and apricot.

97487 to 97490. PRUNUS CERASIFERA DIVARICATA (Ledeb.) C. Schneid. **Plum.**

97487. Leningrad No. 41200. *Round black.* A large tree nearly 25 feet high with slightly oval, medium-sized fruits of dark violet color which become almost black at ma-

97423 to 97490—Continued

turity; the flesh is yellowish red with a mild, very pleasant subacid flavor. The fruits make an excellent jelly.

97488. Leningrad No. 41340.

97489. Leningrad No. 41341.

97490. Leningrad No. 41344.

97491. JUBAEOPSIS CAFFRA Beccari. Phoenicaceae. **Palm.**

From the Union of South Africa. Seeds presented by E. Percy Phillips, principal botanist, Department of Agriculture, Pretoria. Received February 18, 1932.

A southern African palm up to 20 feet high, with leaves 12 to 15 feet long. The edible fruits, about the size of walnuts, differ from those of Cocos by the position of the germinating holes which, in the latter genus, are situated near the base of the nut, but in Jubaeopsis near its equator. The endosperm is hollow, as in the coconut, but without milk.

For previous introduction see 41484.

97492. CASSIA DIPHYLLA L. Caesalpiniaceae.

From Puerto Rico. Seeds presented by Robert R. Davis, plant breeder, Agricultural Experiment Station, Mayaguez. Received February 24, 1932.

A much-branched herbaceous plant, 1 to 2 feet high, native to tropical America. The single pair of leaflets, 1 inch long, are obliquely obovate, and the yellow flowers are borne in axillary clusters. Of possible value as a green-manure or cover crop.

97493 to 97517.

From England. Plants purchased from Hillier & Sons, Winchester. Received February 19, 1932.

97493 to 97509. ACER spp. Aceraceae. **Maple.**

97493. ACER RUFINERVE Sieb. and Zucc.

Albo-limbatum. A form having leaves with a broad margin of white spots.

97494. ACER BARBINERVE Maxim.

A shrubby maple, native to Manchuria, with coarsely toothed 5-lobed leaves.

For previous introduction see 95545.

97495. ACER CARPINIFOLIUM Sieb. and Zucc. **Hornbeam maple.**

A tree up to 30 feet high with oblong sharp-pointed doubly serrate leaves 3 to 5 inches long, short racemes of greenish flowers, and glabrous fruits about an inch long. The bright-green hornbeamlike leaves turn bright brownish yellow in autumn. Native to Japan.

For previous introduction see 95540.

97496. ACER CIRCINATUM Pursh. **Vine maple.**

A shrub or small tree up to 40 feet high, with bright-green 7- to 9-lobed leaves 3 to 4 inches across, cordate at the base and doubly serrate on the margins. The purple and white flowers are in corymbs of 6 to 20 and are followed by winged fruits which spread horizontally. It is native to northwest America.

97493 to 97517—Continued

97497. ACER CISSIFOLIUM (Sieb. and Zucc.) Koch.

A Japanese maple of compact rounded habit becoming 30 feet or more high, with leaves composed of three leaflets up to 4 inches long. The minute flowers are produced in May with the leaves, and the keys, about 1 inch long, occur in long racemes. In autumn the foliage turns red and yellow.

For previous introduction see 95546.

97498. ACER DAVIDI Franch.

A native Chinese maple, 50 to 60 feet high, with large oval heart-shaped coarsely toothed leaves and long pendent clusters of samaras.

For previous introduction see 71176.

97499. ACER DIABOLICUM Blume. **Devil maple.**

A tree up to 30 feet high, with 5-lobed leaves 4 to 8 inches across, the broadly ovate lobes being coarsely and remotely dentate. The racemes of yellow flowers are followed by winged fruits with bristly nutlets. It is native to Japan and closely resembles *A. francheti* of central China.

For previous introduction see 81726.

97500. ACER GRISEUM (Franch.) Pax. **Paperbark maple.**

A handsome maple, native to western China, which becomes 30 feet high under favorable conditions. The leaves are trifoliolate. The striking feature of this maple is the cinnamon-brown papery bark which flakes off like that of the river birch.

For previous introduction see 77821.

97501. ACER LOBELII Ten.

A tree up to 60 feet high, with ascending branches and glaucous branchlets, related to the Coliseum maple, *Acer cappadocicum*, and also a native of Italy. The leaves, 4 to 6 inches across, are usually divided into five long-acuminate lobes and are dark green above and slightly paler beneath. The corymbs of small flowers are followed by winged fruits which spread at a wide angle.

97502. ACER MAXIMOWICZII Pax.

A small tree, native to central China, with 3- to 5-lobed leaves 2 to 3 inches long, the lobes doubly serrate and the middle one much elongated into a tail-like appendage. The flowers are borne in racemes and are followed by wide-angled winged fruits on slender pedicels.

97503. ACER MIYABEI Maxim.

A deciduous tree, native to Japan, 30 to 40 feet high, with a trunk 18 inches in diameter, deeply 3-lobed leaves, downy yellow flowers in corymbs 2 to 3 inches long, and keys up to an inch long.

For previous introduction see 80268.

97504. ACER NIKOENSE (Miquel) Maxim.

A tree up to 40 feet high, native to Japan and central China, with attractive foliage somewhat like the boxelder, which becomes brilliant red or purple in the autumn.

For previous introduction see 95541.

97493 to 97517—Continued

97505. ACER OBLONGUM Wall.

A subtropical maple which becomes 40 to 50 feet high, with a trunk 1 to 2 feet in diameter and dark-green oblong entire leaves up to 7 inches long. The reddish wood is used for making agricultural implements.

For previous introduction see 93172.

97506. ACER RUBRUM TOMENTOSUM Kirch. **Red maple.**

A form of the red maple, with 5-lobed leaves, pubescent beneath, and bright-red flowers.

97507. ACER TETRAMERUM BETULIFOLIUM (Maxim.) Rehder.

A form distinguished from the type by its glabrous, slightly lobulate, ovate to oblong-ovate leaves and by the broader wings of the fruits. It is native to China.

97508. ACER TETRAMERUM TILIIFOLIUM Rehder.

A form distinguished from the type by the cordate leaves, five-nerved at the base, and resembling those of a small-leaved linden. It is native to Szechwan, China.

97509. ACER TRIFLORUM Komarov.

A tree up to 25 feet high, with glabrous branchlets. The leaves are made up of three oblong-lanceolate leaflets with entire or coarsely toothed margins, and the flowers, in groups of three, are followed by densely pubescent fruits having wide-spreading, nearly straight wings about 2 inches long. It is native to Chosen and Manchuria.

For previous introduction see 90655.

97510. EUCRYPHIA GLUTINOSA (Poepp. and Endl.) Focke (*E. pinnatifolia* Gay). Eucryphiaceae.

An evergreen shrub from 3 to 10 feet high, which is particularly attractive because of its large white flowers, 2 to 3 inches across, not unlike a large single rose with a tuft of stamens in the center. It does best in rather moist situations protected from the strongest rays of the sun.

For previous introduction see 62008.

97511 to 97513. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

97511. LONICERA THIBETICA Bur. and Franch. **Tibetan honeysuckle.**

A shrub up to 5 feet high, with wide-spreading slender, often-procumbent branches. The oblong-lanceolate leaves, 1 to 2 inches long, dark green and glossy above and white tomentose beneath, are usually opposite, but sometimes are in whorls of three. The pale-purple tubular-funnelform fragrant flowers are about half an inch long and are followed by red fruits. It is native to Tibet and western China.

97512. LONICERA TRICHOSANTHA Bur. and Franch. **Slender honeysuckle.**

A robust deciduous shrub 8 feet high, native to Szechwan, China. The whole plant has a rounded dense leafy habit and a pale grayish aspect. The dull gray-green leaves are paler beneath, and the pale-yellow flowers fade to a deeper shade. The berries are red.

For previous introduction see 66583.

97493 to 97517—Continued

97513. LONICERA DEFLEXICALYX XEROCALYX (Diels) Rehder. (*L. xerocalyx* Diels).

A rare shrub 15 to 20 feet high with horizontal branches, narrow leaves of rich green, and large rich golden-yellow flowers which appear in May and June. It is an exceedingly handsome species with small tomato-red fruits.

For previous introduction see 55956.

97514 to 97516. PRUNUS SERRULATA Lindl. Amygdalaceae. **Oriental cherry.**

97514. *Benifugen.*

97515. *Fugenzo.*

97516. *Albo-Pleno.*

97517. SORBUS AUCUPARIA EDULIS Dieck. Malaceae. **European mountain ash.**

A nearly glabrous form having purplish petioles and the leaflets serrate usually only above the middle. The larger fruits have a slightly acid agreeable flavor and are used for preserves.

For previous introduction see 81712.

97518 and 97519.

From Algeria. Scions presented by David Lalou, Laghoust, through Oscar S. Heizer, American consul, Algiers. Received February 25, 1932.

97518. MALUS sp. Malaceae. **Apple.**

A small yellow apple from the garden of Mr. Lalou.

97519. PYRUS sp. Malaceae. **Pear.**

A wild pear from the garden of Mr. Lalou.

97520. PUNICA GRANATUM L. Punicaceae. **Pomegranate.**

From Palestine. Cuttings presented by Asaph Grasovsky, senior horticultural officer, Department of Agriculture, Forests and Fisheries, Jerusalem. Received February 25, 1932.

Red Absota, Asmais. From the Jericho Horticultural Station. A variety bearing dark-purple or black fruits which are rather attractive in appearance but inferior in quality.

97521. PODOPHYLLUM EMODI Wall. Berberidaceae. **Himalayan mayapple.**

From India. Seeds presented by the curator, Indian Museum, Industrial Section, Calcutta. Received February 27, 1932.

Collected by the divisional forest officer, Kashmir Division, Knantnag, Kashmir. A perennial herb about a foot high, native to India. It is much like our native species, with leaves 5- to 7-lobed, marbled and shaded with deep bronze in spring. The flowers are pale rose to white and are followed by egg-shaped fruits of deep reddish color.

For previous introduction see 94294.

97522 to 97532.

From the West Indies. Material collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 23, 1932.

97522 to 97532—Continued

97522. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

No. 2729. February 3, 1932. St. Lucia, Windward Islands. Cuttings of the Black Antigua pineapple presented by E. H. Walter, curator of the St. Lucia Botanic Garden. Said to be a small sweet pineapple of good color and tender flesh. Not recommended as a shipping pineapple, but for home use.

97523. ANNONA sp. Annonaceae.

No. 2744. Cuttings collected on Bequia, Grenadine Islands. An Annona with foliage very similar to *A. squamosa,* but much darker green, and brown-purple fruits, which although about the same size and general shape as those of *A. squamosa,* are much firmer and have an entirely different type of protuberances.

97524. CALATHEA ALLOUIA (Aubl.) Lindl. Marantaceae.

No. 2727. *Llereb* or *topi-nambour.* Collected February 2, 1932, on St. Lucia and presented by Mrs. Charles W. Doorley. A plant which produces a large number of small egg-shaped, thin-skinned tubers on its slender roots. The tubers have a delicate sweetish flavor and are used boiled and in soup.

97525. CITRUS AURANTIUM L. Rutaceae. **Seville orange.**

No. 2714. Collected January 29, 1932, in the Botanic Garden, Dominica.

97526. CITRUS sp. Rutaceae.

No. 2830. From Port-of-Spain, Trinidad, February 14, 1932. A sport or hybrid with a very thin rough green-yellow skin, thick tough segment walls, and tender flesh comparable with a good grapefruit.

97527. HELICONIA sp. Musaceae.

No. 2813. Collected near Grand Etang Lake at 2 000 feet altitude in the mountains of Grenada, Windward Islands. A most striking and decorative species with immense floral bracts forming a curious inflorescence 2 feet long with alternate bracts 6 inches long and 2 inches wide. The bracts are vivid scarlet with golden-yellow margins. The plant requires a continuous supply of moisture and is suited for culture in ponds or water gardens where it can be shaded.

97528. KAEMPFERIA OVALIFOLIA Roxb. Zinziberaceae.

No. 2728. *Resurrection lily.* Roots presented by Mrs. Charles W. Doorley, St. Lucia. A gingerlike plant with orchidlike, very fragrant mauve flowers which appear at Easter time.

97529. MANIHOT ESCULENTA Crantz (*M. utilissima* Pohl). Euphorbiaceae. **Cassava.**

No. 2752. Cuttings collected February 5, 1932, on St. Vincent, Windward Islands.

For previous introduction and description see 95666.

97530. MARANTA ARUNDINACEA L. Marantaceae. **Bermuda arrowroot.**

No. 2759. Rhizomes collected on St. Vincent, February 5, 1932. One of the principal crops of the island. This arrowroot requires a light soil and plenty of water, but it cannot be grown successfully except where there is plenty of cheap labor.

97531. (Undetermined.)

No. 2726. St. Lucia, February 3, 1932. Seeds of a tall handsome tree with large ovate leaves, glossy above, and straw-colored fruits 2 inches long which enclose large glossy brown seeds the size of chestnuts.

97532. MABA INCONSTANS (Jacq.) Griseb. Diospyraceae.

No. 2745. Cuttings collected February 5, 1932, on Bequia, Grenadine Islands. A small attractive tree with gray bark, and large glossy leaves. The small dark berries are eaten by the children.

97533 to 97536.

From South America. Seeds presented by M. J. Rivero, Cali, Colombia, through C. B. Doyle, Bureau of Plant Industry. Received February 25, 1932.

97533. ARISTOLOCHIA sp. Aristolochiaceae.

97534. TIBOUCHINA sp. Melastomaceae.

A flowering shrub.

97535. ZAMIA sp. Cycadaceae.

97536. (Undetermined.)

A timber tree.

97537. CEIBA ACUMINATA (S. Wats.) Rose. Bombacaceae. **Pochote.**

From Mexico. Seeds presented by H. Fred Smith, Alamos, Sonora. Received February 24, 1932.

A close relative of the kapok tree, *Ceiba pentandra.* A large or medium-sized tree with a spiny trunk, compound leaves, and hard oblong fruits about 7 inches long, which contain a whitish down used for stuffing pillows, life preservers, and for making candlewicks. Native to western and southern Mexico.

For previous introduction see 91619.

97538. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Argentina. Seeds presented by E. F. Schultz, Assistant Director, Estación Experimental Agrícola, Tucuman. Received February 29, 1932.

Cherry tomato. A small-fruited precocious variety of the ordinary tomato, grown on the dry side of the high mountain range west of Tucuman.

97539 to 97553. Phoenicaceae. **Palm.**

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 23, 1932.

97539. ACANTHORHIZA ACULEATA (Liebm.) Wendl. **Rootspine palm.**

No. 2797. Collected in the Botanic Garden of Grenada, Windward Islands, February 10, 1932. A palm, native to Mexico, with a trunk 30 to 40 feet high, armed at the base with spines formed of the thickened aerial roots. The orbicular fan-shaped leaves are about 5 feet in diameter on stalks 4 feet long; the flowers are dark creamy pink.

For previous introduction see 80170.

97539 to 97553—Continued

97540. ARECA CATECHU L. **Betel palm.**

No. 2802. Collected on Grenada, February 9, 1932. The betel palm is considered one of the most graceful, bearing at the top of its trunk, 40 to 100 feet high, a large crown of pinnately divided leaves 4 to 6 feet long, the lowest usually pendulous. The ovoid smooth fruits, 1 to 2 inches in diameter, are orange yellow or scarlet, and furnish the well-known betel nut. It is native to southeastern Asia.

For previous introduction see 81583.

97541. PTYCHOSPERMA sp.

No. 2798. Collected at Grenada, Februbary 10, 1932. A handsome cluster palm which has pinnate leaves with obliquely truncated pinnae. The slender stems rising from a common base make this, if possible, even more attractive than the yellow palm, *Chrysalidocarpus lutescens*.

97542. ATTALEA COHUNE Mart. **Cohune.**

No. 2746. Collected in the Botanic Garden of St. Vincent, Windward Islands, February 4, 1932. A magnificent feather-leaved palm, native to the West Indies and Central America, which reaches a height of 40 feet, with leaves about 20 feet long, produced abundantly at the top of the trunk. The yellowish flowers are borne very freely, and the ovoid fruit, 2 to 3 inches long, contains the seed or nut which yields an oil of considerable value, as it is of high quality, and finds a ready sale for cooking purposes.

For previous introduction see 92891.

97543. ATTALEA SPECTABILIS Mart.

No. 2840. Collected in the Botanic Garden, Port-of-Spain, Trinidad, February 13, 1932. A nearly stemless palm with large pinnate erect or spreading leaves up to 20 feet long. It is native to the banks of the Amazon in Brazil.

For previous introduction see 80175.

97544. TILMIA sp.

No. 2735. Collected February 2, 1932 in the Botanic Garden at Bar de l'Isle, St. Lucia, Windward Islands. A slender spiny feather palm over 20 feet high which grows in the high altitudes of the mountain crests on the island of St. Lucia.

97545. PTYCHOSPERMA sp.

No. 2838. Collected February 13, 1932 near the Government House in the Botanic Garden, Port-of-Spain, Trinidad. A spineless feather palm which forms clumps 9 feet high and has dark-red fruit.

97546. CYRTOSTACHYS RENDA Blume.

No. 2834. From Port-of-Spain, Trinidad, February 15, 1932. Presented by Mrs. Fitt, daughter of Eugene André, orchid hunter and explorer of the Orinoco. *Sealing wax* palm. A handsome palm with scarlet leaf sheaths. A Sumatran palm of stately habit, about 25 feet high, with a slender spineless trunk crowned by a graceful cluster of pinnately divided leaves.

For previous introduction see 93406.

97539 to 97553—Continued

97547. LIVISTONA ALTISSIMA Zoll.

No. 2799. Collected February 10, 1932, in the Botanic Garden, Grenada, Grenadine Islands. A graceful palm, native to the East Indies, up to 80 feet high, with fan-shaped leaves. The hardwood is valued by the natives of the East Indies for construction work.

For previous introduction see 90802.

97548. LIVISTONA ROTUNDIFOLIA (Lam.) Mart. **Java fan palm.**

No. 2800. Collected in the Botanic Garden, Grenada, February 10, 1932. An erect pinnate-leaved palm, native to tropical Asia, about the same size as the coconut palm. The hard durable wood is used for general construction.

For previous introduction see 93413.

97549. TILMIA sp.

No. 2829. Collected February 13, 1932, on Trinidad. A slender palm with pinnate leaves whose pinnae are ornately truncate. The trunk and leaf petioles are covered with dark-red spines.

97550. ROYSTONEA BORINQUENA O. F. Cook. **Puerto Rico royal palm.**

No. 2839. Collected February 13, 1932, at Port-of-Spain, Trinidad. A much shorter and more robust palm than either *R. regia* or *R. oleracea*, with a smaller seed than either.

97551. ROYSTONEA OLERACEA (Jacq.) O. F. Cook.

No. 2837. Collected in the Botanic Garden, Port-of-Spain, Trinidad, February 13, 1932.

For previous introduction and description see 97286.

97552. SABAL GLAUCESCENS Lodd. **Palmetto.**

No. 2801. Collected February 10, 1932, in the Botanic Garden, Grenada, Grenadine Islands.

For previous introduction and description see 97290.

97553. JESSENIA OLIGOCARPA Griseb. and Wendl.

No. 2833. A tall, handsome, slender feather palm, 35 to 40 feet high, related to Euterpe. The dark-brown fruits are oval. The tree thrives on rather poor soil and seems to prefer the shade. It may be suitable as a house plant.

97554 to 97557. PYRUS spp. Malaceae. **Pear.**

From India. Scions presented by His Highness Government, Jammu and Kashmir, Kashmir Province, Srinagar, through M. R. Fotidar, assistant director of horticulture. Received February 25, 1932.

Strains of the *Williams* pear, introduced into India from France, obtained for the use of Department specialists.

97554. PYRUS sp.

Williams.

97555. PYRUS sp.

Williams; early. This is said to be the same as the Bartlett.

97556. PYRUS sp.

Williams; medium. A midseason variety resembling the Bartlett.

97554 to 97557—Continued

97557. PYRUS sp.

Williams; late. A late variety resembling the Bartlett.

97558 and 97559. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

From Brazil. Plants presented by F. C. Camargo, Estacão de Pomicultura de Deodoro, Rio de Janeiro. Received February 29, 1932.

97558. No. 184/31. *Roxo de guaratiba.*

97559. No. 185/31. *Verde de guaratiba.*

97560 to 97580.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931-32 Allison V. Armour expedition. Received February 23, 1932.

97560. AERIDES LAWRENCIAE SANDERIANUM (Reichenb. f.) Sander. Orchidaceae.

No. 2762. Presented February 3, 1932, by Mrs. Charles W. Doorley, St. Lucia, Windward Islands. An erect leafy-stemmed orchid without pseudobulbs, native to the Philippines. *A. lawrenciae* has leaves 1 foot long and 2 inches broad and the fragrant white flowers, 1 to 2 inches long, are in racemes as long as the leaves. The form *sanderianum* differs in having narrower leaves and yellowish flowers.

97561. ANNONA RETICULATA L. Annonaceae. **Custard-apple.**

No. 2744. Collected February 5, 1932, on Bequia, Grenadine Islands.

97562. ARTOCARPUS COMMUNIS Forst. Moraceae. **Breadnut.**

No. 2715. Purchased in the market at St. Lucia, February 3, 1932. A form whose seeds are its chief attraction, as they are roasted and eaten. The pulp is also used, but is considered inferior to that of the seedless breadfruit.

97563. ARTOCARPUS INTEGRA (Thunb.) L. Moraceae. **Jackfruit.**

No. 2811. Collected in the Botanic Garden, Grenada, Grenadine Islands, January 10, 1932.

97564. CACTUS INTORTUS Mill. Cactaceae.

No. 2628. From St. Kitts, Leeward Islands, January 23, 1932. *Turkscap* cactus. A red-brown cactus with the upper part shaped like a Turk's cap. The small pink flowers are followed by deep pink fruits filled with black seeds. It is a slow-growing species adapted to conditions where rather heavy summer rains and winter droughts occur.

97565. CALLIANDRA SURINAMENSIS Benth. Mimosaceae.

No. 2822. Collected February 10, 1932, in the Botanic Garden, Grenada. A beautiful large open branching shrub with showy flowers composed of many long pink and white stamens.

97566. CAPPARIS FLEXUOSA L. Capparidaceae.

No. 2618. Collected in a dry savanna pond on Saona Island Dominican Republic, January 20, 1932. A shrub or small tree up to 25 feet high with long flexuose branches, oblong leaves 2 to 3 inches long, clusters of small white or pale-rose flowers, and fruits 3 to 7 inches long, which gradually open and expose the bright red pulp inside. It is native to Cuba.

97560 to 97580—Continued

97567. CASSIA BACILLARIS L. Caesalpiniaceae.

No. 2765. Collected January 28, 1932, in the Botanic Garden at Dominica, Leeward Islands. A small tree of rather straggly habit, suitable for street and park planting. The golden-yellow flowers an inch or more in diameter are in loose flowering racemes.

For previous introduction see 68020.

97568. CHRYSOPHYLLUM sp. Sapotaceae.

No. 2717. Collected in the forest of Bar de l'Isle, St. Lucia, February 3 1932. A tall tree with large glossy leaves and long pointed fruits covered with a rough fuzz. The parrots seem very fond of the fruit. Introduced as a possible stock for the star-apple.

97569. COCCOLOBA GRANDIFOLIA Jacq. (*C. pubescens* L.). Polygonaceae.

No. 2656. Collected January 26, 1932, at 1,200 feet altitude on Boggy Peak above McCarthy Valley, Antigua, Leeward Islands. A giant-leaved species which, when grown in the shade, has leaves 3 feet in diameter. It is a rare species related to the seagrape.

97570. CRESCENTIA CUCURBITINA L. Bignoniaceae.

No. 2826. Collected in the Botanic Garden at Grenada, February 10, 1932. A shade tree with abundant foliage and fruits three fourths of an inch in diameter which contain a single seed.

97571. FICUS sp. Moraceae. **Fig.**

No. 2758. Collected on Mayero, Grenadine Islands, February 6, 1932. A tree with a trunk a foot in diameter and aerial roots; found growing in an extremely dry and wind-swept situation at the summit of a very rocky hill. The leaves were large and glossy, and the masses of almost white fruits turn pink as they ripen.

97572. FICUS sp. Moraceae. **Fig.**

No. 2793. From the Botanic Garden, Carriacou, Grenadine Islands, February 8, 1932. A handsome clean gray-barked tree with spreading drooping branches after the habit of *F. benjamina*, but bearing lemon-yellow fruits one half inch in diameter.

97573. MYRISTICA FRAGRANS Houtt. Myristicaceae. **Common nutmeg.**

No. 2832. Collected February 10, 1932, at Avondale, Grenada, Grenadine Islands. An East Indian tree, 20 to 25 feet high, with smooth gray-brown bark, oval dark-green sharp-pointed leaves 3 to 6 inches long, slightly aromatic when bruised, and pale yellow flowers in axillary racemes, followed by nearly spherical pearlike drupes. The flesh of these drupes is yellow and full of astringent juice and encloses a hard-shelled nut, the seed of which is the nutmeg of commerce.

For previous introduction see 93534.

97574 and 97575. PITCAIRNIA CORALLINA Linden. Bromeliaceae.

The outer leaves of this Colombian species are hard, dry, and spineless; the

97560 to 97580—Continued

inner leaves have brown-spined petioles and broad plicate recurved blades. The coral-red flowers, 3 inches long, are in a raceme borne on a bright-red scape a foot high.

For previous introduction see 89494.

97574. No. 2723. Collected January 28, 1932, in the Botanic Garden, Dominica, Leeward Islands.

97575. No. 2808. Collected in the Botanic Garden, Grenada, Grenadine Islands, February 10, 1932.

97576. PLUMERIA ALBA L. Apocynaceae. **Frangipani.**

No. 2766. Collected on Mayero, Grenadine Islands, February 6, 1932. Found in thickets on the rocks overlooking the sea where it was exposed to the drying salt-spray laden trade winds. A tree up to 30 feet high, native to the West Indies. The linear-lanceolate, subcoriaceous leaves, 10 inches long, are glabrous above and densely white-tomentose beneath. The salver-shaped flowers, 2 inches across, are white with a yellow eye and are borne in compact clusters.

97577. PORTLANDIA GRANDIFLORA L. Rubiaceae.

No. 2825. Collected at Port-of-Spain, Trinidad, February 12, 1932. A tropical shrub up to 15 feet high, native to the West Indies, with opposite elliptical leathery leaves and axillary fragrant white flowers which are funnel-form and 5 inches long.

For previous introduction see 80189.

97578. PTERYGOTA ALATA (Roxb.) R. Br. Sterculiaceae.

No. 2651. Collected in the Botanic Garden at St. Johns, Antigua, Leeward Islands, January 26, 1932. A large tree, native to India, having ash-colored bark and yellow-tomentose branchlets. The large heart-shaped leaves, 10 inches long and 7 inches wide, are clustered at the ends of the branches. The panicles of densely tomentose flowers, without petals, are shorter than the leaves.

97579. TABEBUIA LEUCOXYLA DC. Bignoniaceae.

No. 2831. Collected January 29, 1932, on Dominica, Leeward Islands. *White cedar.* A tree with clean gray bark, deep green leaves, and large pale-pink flowers. It is much prized in the West Indies as an ornamental, as well as for its strong hard white wood, which is used for furniture.

97580. STEGNOSPERMA HALIMIFOLIUM Benth. Phytolaccaceae.

No. 2606. Collected January 18, 1932, at Beata Island, Dominican Republic. A pretty scandent shrub with red-brown fruits which when ripe open and expose a magenta aril that almost conceals the shiny black seed. In habit it is very much like the bittersweet and could probably be used in the same way for house decoration.

97581 to 97629.

From Scotland. Seeds presented by the Royal Botanic Garden, Edinburgh. Received February 24, 1932.

97581 to 97583. ALLIUM spp. Liliaceae. **Onion.**

97581 to 97629—Continued

97581. ALLIUM OREOPHILUM Meyer.

A bulbous perennial with linear to lanceolate leaves and hemispheric umbels of purple-lavender flowers. It is native to the mountains of the Caucasus region.

For previous introduction see 91796.

97582. ALLIUM VICTORIALIS L.

For previous introduction and description see 95570.

97583. ALLIUM WALLICHIANUM Steud.

A tall eastern Asiatic onion with narrow flat leaves about 3 feet long and purple flower heads.

For previous introduction see 91801.

97584. ALYSSUM TRICHOSTACHYUM Rupr. Brassicaceae.

A yellow-flowered herbaceous perennial from the mountains of the western Caucasus. It is closely related to *A. montanum*, differing chiefly in being larger and more pubescent.

97585. ANTHEMIS CINEREA Panc. Asteraceae. **Camomile.**

A perennial camomile from Bulgaria, with ashy white pubescent ovate or spatulate leaves and showy daisylike flowers on stems a foot high.

97586. ANTHEMIS MACEDONICA Boiss. and Orph. Asteraceae.

An annual composite with numerous abbreviated ascending stems, mostly unbranched, bearing small white-rayed flower heads. Native to the mountains of Macedonia.

97587 to 97596. Plumbaginaceae. **Thrift.**

97587. ARMERIA ADAMOVICII Halacsy.

A cespitose perennial with a dense rosette of broadly linear leaves and white flower heads on scapes 7 to 9 inches high. Native to Macedonia.

97588. AMERIA BERLENGENSIS Daveau.

A woody cespitose perennial which becomes 2 feet in diameter. The lanceolate leaves form a dense rosette, and the large rosy flowers are on numerous scapes. Native to Portugal.

97589. STATICE CHILENSIS (Boiss.) Macloskie.

An alpine perennial native to Chile with linear acuminate basal leaves and purplish flowers borne on a slender scape.

97590. ARMERIA ELONGATA Hoffm.

A tufted perennial with a rosette of flat linear leaves and small white flowers on a tall slender scape. Native to central Europe.

97591. STATICE FASCICULATA Vent.

A glabrous perennial, subshrubby at the base, with narrow grassy leaves and dense heads of pale-pink armeria-like flowers. It is native to southwestern Europe.

For previous introduction see 95497.

97592. ARMERIA LONGEARISTATA Boiss. and Reut.

A perennial herb with a rosette of flaccid lanceolate leaves 2 to 3 inches

97581 to 97629—Continued

long and white flowers on a scape about a foot high. Native to southern Spain.

97593. STATICE MACLOVIANA (Cham.) Macloskie.

A perennial herb with a rosette of grasslike leaves and pinkish flowers on slender scapes. Native to southern Europe.

97594. STATICE PUNGENS Brot.

A woody plant about 6 inches high with rigid lanceolate somewhat glaucous leaves 2 to 3 inches long and rosy flowers in small heads on simple scapes. Native to Spain.

97595. ARMERIA SARDOA Spreng.

A somewhat woody perennial with short furrowed filiform leaves and small subspherical flower heads on slender scapes. It is native to Sardinia.

97596. STATICE SIBIRICA (Turcz.) Ledeb.

A low herbaceous perennial, native to Siberia, with a rosette of linear glabrous leaves. The small white flowers are borne in a compact head at the top of a naked scape 12 to 18 inches high.

97597. BULBINELLA HOOKERI (Colenso) Cheeseman. Liliaceae.

For previous introduction and description see 95667.

97598 to 97600. CHRYSANTHEMUM spp. Asteraceae.

97598. CHRYSANTHEMUM CAUCASICUM Pers.

A perennial chrysanthemum, native to the Caucasus, with white flowers and bipinnate leaves with linear-subulate subdivisions.

For previous introduction see 40630.

97599. CHRYSANTHEMUM PULVERULENTUM Lag. (*Pyrethrum hispanicum* Willk.).

A herbaceous perennial with a woody base, deeply pinnatifid lower leaves, and linear stem leaves. The plant is very variable in size and habit, but usually spreads to form prostrate mats from which the flowers, white to yellow or even purplish yellow, rise on almost naked 6 to 8 inch stems. Native to central Spain.

For previous introduction see 95479.

97600. CHRYSANTHEMUM MAWII Hook. f.

A short woody perennial, native to Morocco, forming margueritelike bushes 1 to 2 feet high, with small woolly gray triangular-oblong pinnatifid leaves. The long-stalked flowers are 1 to 2 inches across, have reddish-purple disks, and 3-toothed white rays that are reddish on the back.

For previous introduction see 95480.

97601. DIPELTA YUNNANENSIS Franch. Caprifoliaceae.

A shrub 10 to 15 feet high, native to western China, with opposite entire lanceolate leaves 3 to 6 inches long and leafy racemes of 2-lipped tubular-campanulate pinkish to purple flowers having shieldlike floral bracts.

For previous introduction see 94000.

97581 to 97629—Continued

97602. DRABA SUBAMPLEXICAULIS Meyer. Brassicaceae.

A hardy herbaceous perennial with a rosette of oblong purplish leaves and small white flowers on erect stems 1 to 2 inches high. Native to the Altai Mountains, Siberia.

97603 to 97607. DRACOCEPHALUM spp. Menthaceae. Dragonhead.

97603. DRACOCEPHALUM ISABELLAE Forrest.

A mintlike perennial 12 to 18 inches high, native to China, with leaves 1 inch long divided into 5 to 7 linear segments, and spikes 5 to 6 inches long, made up of verticillate clusters of dragon-shaped, deep blue-purple flowers 1 to 2 inches long.

For previous introduction see 91808.

97604. DRACOCEPHALUM RUPRECHTI Regel.

A dwarf compact perennial 1 to 2 feet high, with ovate-lanceloate incised and toothed leaves and axillary clusters of rose-purple to lilac tubular 2-lipped flowers 1 inch long. It is native to Turkistan.

For previous introduction see 91809.

97605. DRACOCEPHALUM RUYSCHIANA L. Siberian dragonhead.

For previous introduction and description see 95670.

97606. DRACOCEPHALUM SPECIOSUM Benth.

A robust herbaceous perennial 18 inches high, with radical leaves on petioles up to 1 foot long. The leaf blades are orbicular-cordate, crenate, and 2 to 4 inches across; the tubular flowers, 1 inch long, are blue-purple with black spots and are borne in dense heads. It is native to the Himalayas in India.

For previous introduction see 93201.

97607. DRACOCEPHALUM TANGUTICUM Maxim.

An erect herbaceous perennial, 1 to 2 feet high, with pinnately cut leaves 2 inches long and sky-blue flowers an inch long in interrupted spikes.

97608 to 97612. FUCHSIA spp. Onagraceae.

97608. FUCHSIA BACILLARIS Lindl.

A compact plant with short-jointed branches and very small flaring-mouthed rosy drooping flowers. Native to Mexico.

97609 and 97610. FUCHSIA CORYMBIFLORA Ruiz and Pav.

97609. A handsome Peruvian fuchsia with large serrate long-pointed leaves and deep-red flowers. The plant becomes tall, but requires support in order to attain full height. It is adapted for training on pillars or pergolas in the warmest parts of the United States.

97610. *Alba.* A form with white flowers.

97611. FUCHSIA PROCUMBENS R. Cunn. Trailing fuchsia.

A slender spreading shrub with fragrant flowers. A good plant for the rock garden if the climate is mild.

97581 to 97629—Continued

97612. FUCHSIA THYMIFOLIA H. B. K.

A shrub 3 to 6 feet high, with small ovate nearly opposite leaves pubescent above, red flowers having obovate undulate petals, and red fruits.

For previous introduction see 90091.

97613 to 97616. KALANCHOE spp. Crassulaceae.

97613. KALANCHOE BENTII C. H. Wright.

A succulent with dull olive-green stems about 3 feet high, thick fleshy spreading and recurved terete leaves 3 to 6 inches long, and panicles of erect tubular white flowers half an inch long, the buds being pink. It is native to Arabia.

For previous introduction see 91822.

97614. KALANCHOE CARNEA N. E. Brown.

A succulent perennial with simple stems about 2 feet high, oval to obovate, crenate-dentate leaves, and branched cymes of light rose or pink very fragrant flowers. Native to southern Africa.

For previous introduction see 86231.

97615. KALANCHOE CRENATA Haw.

A succulent perennial, native to tropical Africa, 2 to 6 feet high, with a thick fibrous root, oblong or roundish oval-crenate leaves about 2 inches long, and bright-yellow flowers half an inch long in terminal and axillary cymes.

For previous introduction see 93091.

97616. KALANCHOE ROTUNDIFOLIA Haw.

A succulent perennial, 1 to 3 feet high, with a slender stem which has a few leaves at the base and is naked above. The fleshy leaves, 1 to 2 inches long, vary in shape from broadly obovate to spatulate and are entire or crenate. The small orange or yellow flowers are borne in flat-topped panicles. Native to South Africa.

For previous introduction see 88752.

97617. GAYA LYALLII (Hook. f.) Baker f. (*Plagianthus lyallii* Hook. f.). Malvaceae. **Lacebark.**

A beautiful tree up to 30 feet high, graceful and spreading, with the branchlets covered with stellate hairs. The cordate leaves are 2 to 4 inches long on slender petioles and the large white flowers, an inch across, are borne in axillary clusters. Native to New Zealand.

For previous introduction see 89237.

97618 and 97619. PODOPHYLLUM EMODI Wall. Berberidaceae. **Himalayan mayapple.**

97618. For previous introduction and description see 97521.

97619. Variety *chinense*. Probably a form from China.

97620. RANUNCULUS GRAMINEUS L. Ranunculaceae. **Grassy buttercup.**

A smooth herbaceous perennial with rosettes of linear to lanceolate leaves and bright-yellow flowers on stalks 6 to 12 inches high. It is native to Europe.

For previous introduction see 95494.

97581 to 97629—Continued

97621 to 97627. RHODODENDRON spp. Ericaceae.

97621. RHODODENDRON CAMPYLOCARPUM Hook. f.

For previous introduction and description see 97386.

97622. RHODODENDRON CHARTOPHYLLUM Franch.

A fine species native to Yunnan, China, where it grows at altitudes between 9,000 and 12,000 feet. It is deciduous at flowering, and the large flowers are all shades from white to mauve, deep pink, and even blue smoke colored.

For previous introduction see 97388.

97623. RHODODENDRON DECORUM Franch.

A western Chinese evergreen shrub with glabrous leaves, glaucous beneath, and broadly bell-shaped white or pink flowers 2 inches across.

For previous introduction see 86759.

97624. RHODODENDRON GALACTINUM Balf. f.

A tree, 15 to 22 feet high, native to Szechwan, China. The oblong to lanceolate leaves, 5 to 8 inches long, are glabrous and dark green above and covered beneath with buff-gray or pale-cinnamon indumentum. The bell-shaped flowers, over 1 inch long, are in clusters of about 15, and are pale-rose with deep crimson blotches inside.

97625. RHODODENDRON HIPPOPHAEOIDES Balf. and Smith.

For previous introduction and description see 97394.

97626. RHODODENDRON PENTAPHYLLUM Maxim. (*R. quinquefolium roseum* Rehder). **Fiveleaf azalea.**

A deciduous shrub of the section Rhodora, up to 25 feet high with usually five elliptic-lanceolate leaves at the ends of the branches. The rose-pink flowers, 1 to 2 inches across, are solitary or in twos, appearing before or with the leaves which turn orange or crimson in the autumn. Native to Japan.

For previous introduction see 92033.

97627. RHODODENDRON PSEUDOYANTHINUM Balf. f.

A shrub 1 to 9 feet high, with ovate-lanceolate thick and rigid leaves up to 3 inches long, glossy dark green above and pale green beneath. The campanulate flowers, 2 inches across, are pink spotted crimson within and are in a racemose umbel of 9 or more flowers.

For previous introduction see 66477.

97628. SYRINGA TOMENTELLA Bur. and Franch. (*S. adamiana* Balf. and Smith). Oleaceae. **Felty lilac.**

A bushy shrub, about 10 feet high, with elliptic leaves which are hairy beneath and loose long-branched spikes of fine mauve-pink flowers, produced in late May and early June. It is native to western China.

For previous introduction see 91833.

97581 to 97629—Continued

97629. SYRINGA PINETORUM W. W. Smith. Oleaceae. **Lilac.**

A shrub related to *S. microphylla*, about 10 feet high, with densely pilose branchlets, ovate to ovate-lanceolate leaves 2 to 4 inches long, and purplish flowers in panicles about 9 inches long. It is native to southwestern China.

For previous introduction see 86765.

97630 to 97656.

From India. Seeds presented by W. Koelz, Himalayan Research Institute, Nagar, Kulu, Punjab. Received February 11, 1932.

97630. AESCULUS ASSAMICA Griffith. Aesculaceae.

From Kulu, Punjab. A tree up to 4 feet in diameter, found between 7,000 and 9,000 feet altitude. A moderate-sized deciduous tree with soft white close-grained wood; the 5 to 7 leaflets are shortly petioled, and the narrowly lanceolate panicles of white and yellow flowers are as long as the leaves.

For previous introduction see 39102.

97631. AQUILEGIA sp. Ranunculaceae. **Columbine.**

Collected at Wakka, Zankskar, at 14,000 feet altitude. A columbine with very attractive blue flowers and very glaucous blue-gray foliage.

97632. BUXUS sp. Buxaceae. **Box.**

From Sirham, Kulu, Punjab. A box, 4 feet high, found in open spaces in fir forest between 8,000 and 9,000 feet altitude.

97633. CICER sp. Fabaceae.

Collected at Pensi La, Zankskar, at 14,000 feet altitude.

97634. CLEMATIS sp. Ranunculaceae.

Collected in Ladakh Province at 14,000 feet altitude. A very attractive clematis with large yellow flowers.

97635. COTONEASTER sp. Malaceae.

Collected at an altitude of 6,000 feet at Darkali, Rampur-Bushahr. An arborescent cotoneaster which becomes 20 feet high.

97636. COTONEASTER sp. Malaceae.

Collected at Potang La at 13,000 feet altitude. A large shrub with attractive habit, foliage, and fruit.

97637. CUCURBITA MAXIMA Duchesne. Cucurbitaceae. **Squash.**

From Darkali, Rampur-Bushahr, at 8,000 feet altitude. A green squash which sometimes grows to weigh 40 pounds. The yellow flesh is of superb flavor; considered the best of its kind in cultivation there and superior to anything in America. The natives say that it thrives best if the climate is not too hot. It seems to be confined to a very small valley here.

97638. CUCURBITA PEPO L. Cucurbitaceae. **Pumpkin.**

Collected at Darkali, Rampur-Bushahr. An edible pumpkin.

97630 to 97656—Continued

97639. DELPHINIUM sp. Ranunculaceae. **Larkspur.**

Collected below Pensi La, Zankskar, at 14,000 feet altitude.

97640. DIANTHUS sp. Silenaceae.

Collected at 12,000 feet altitude in Rangdum, Zankskar. A very attractive little pink dianthus found on a well-watered slope.

97641. EUONYMUS sp. Celastraceae.

From Kulu, Punjab. A small tree or shrub collected in a forest between 8,000 and 9,000 feet altitude.

97642. EUONYMUS sp. Celastraceae.

Collected at Darkali, Rampur-Bushahr. A large evergreen forest tree which is very attractive in its fruiting season. It tolerates snow for two months, but not much frost.

97643. HYPERICUM sp. Hypericaceae.

From Darkali, Rampur-Bushahr. An attractive shrub 4 feet high collected at the forest edge at 8,000 feet altitude.

97644 and 97645. PEDICULARIS spp. Scrophulariaceae.

Collected at Rangdum, Zankskar, at 13,000 feet altitude.

97644. PEDICULARIS sp.

A plant nearly 3 feet high, with flowers which are probably yellow.

97645. PEDICULARIS sp.

A very attractive form with rose-lavender flowers.

97646. PINUS GERARDIANA Wall. Pinaceae. **Pine.**

Seeds purchased at Kunawar, Rampur-Bushahr. A very attractive tree from the dry uplands. It has about the same ecological relationships as *Pinus edulis*.

97647. RHODODENDRON ARBOREUM J. E. Smith. Ericaceae. **Tree rhododendron.**

From Rampur-Bushahr. A very attractive tree up to 2½ feet in diameter, which grows between 7,000 and 9,000 feet altitude on slopes too isolated for other trees. It will tolerate snow and frost.

For previous introduction see 97376.

97648. ROSA sp. Rosaceae. **Rose.**

From Kulu, Punjab. A rose with beautiful pink flowers, which flowers sparingly. Collected in the forest between 8,000 and 10,000 feet altitude.

97649 and 97650. SKIMMIA LAUREOLA (DC.) Sieb. and Zucc. Rutaceae.

Collected in Kulu, Punjab. An evergreen, strongly aromatic shrub found throughout the temperate Himalayas at altitudes ranging from 6,000 to 10,000 feet. The white flowers are crowded into terminal panicles, and the red fleshy oval fruits are less than an inch in length. The timber is used to make hoe and ax handles.

For previous introduction see 55704.

97649. A shrub 2 feet high, growing in the shade. The very interesting flowers have a musky scent.

97650. Seeds received mixed with *Juniperus pseudosabina*.

97630 to 97656—Continued

97651. VIBURNUM sp. Caprifoliaceae.

Collected at Rampur-Bushahr in a forest at 8,000 feet altitude. A well-formed shrub, 15 feet high, laden with attractive clusters of scarlet berries which are pleasantly acid.

97652. VIBURNUM sp. Caprifoliaceae.

Collected at Kulu, Punjab, between 8,000 and 10,000 feet altitude. This viburnum blooms from December until April in this region.

97653. (Undetermined.)

From Rampur-Bushahr. A shrub 2 feet high, collected in dense forest at 7,000 feet altitude. The fruit and foliage are very attractive, and the flowers are said to be likewise.

97654. (Undetermined.)

From Abring, Zankskar. A shrubby perennial, 4 feet high, chiefly interesting for its fragrance. Collected on a dry slope at 12,000 feet altitude.

97655. (Undetermined.)

Collected on an arid slope at 11,000 feet altitude in Ladakh Province. A prostrate shrubby perennial with large white fragrant flowers.

97656. (Undetermined.)

From Darkali, Rampur-Bushahr. *Monkey-apple.* An attractive small tree found growing in an oak forest at 9,000 feet altitude. The fruit is edible and said to be very attractive to monkeys.

97657 to 97678. RHODODENDRON spp. Ericaceae.

From England. Seeds presented by J. R. Stevenson, Ascot. Received February 25, 1932.

97657. RHODODENDRON ARBOREUM J. E. Smith. **Tree rhododendron.**

For previous introduction and description see 97647.

97658. RHODODENDRON BURMANICUM Hutchinson.

A large shrub, native to southwestern Burma, with oblanceolate to obovate evergreen leaves, densely scaly on both surfaces. The green-yellow fragrant campanulate flowers, in 5- or 6-flowered umbellate clusters, are scaly all over the outside.

97659. RHODODENDRON CALOPHYTUM Franch.

For previous introduction and description see 97383.

97660. RHODODENDRON CROCEUM Balf. and Smith.

Forrest No. 12731. A shrub up to 22 feet high, with somewhat papery oblong leaves 5 inches long and flesh-yellow, red-spotted flowers over 1 inch long in racemose umbels. Native to Yunnan.

For previous introduction see 94111.

97661. RHODODENDRON DECORUM Franch.

For previous introduction and description see 97623.

97662. RHODODENDRON FALCONERI Hook. f.

This shrub or tree, which sometimes attains a height of 30 feet, is native to northeastern India. The large deep-green leaves, often a foot long, and the whitish densely clustered flowers, make it a very fine ornamental.

For previous introduction see 58921.

97663. RHODODENDRON FLOCCIGERUM Franch.

Forrest No. 19769. A shrub 4 feet high found in the alpine regions of Tsehchung Mekong, Yunnan, China. The linear-elliptical leaves are rich green and covered with brown deciduous wool. The flowers are red with a purplish tinge.

For previous introduction see 59474.

97664. RHODODENDRON FULVUM Balf. and Smith.

A straggling tree, 9 to 18 feet high, native to western Yunnan, China. The obovate leathery leaves, 6 to 8 inches long, are glabrous above and are covered beneath with a pale-fawn to deep-crimson suedelike indumentum. The inflorescence is a loosely rounded umbellate truss of about 20 compunulate flowers 1 to 2 inches long, which are white with a deep-rose flush and have a crimson blotch at the base.

97665. RHODODENDRON GRIERSONIANUM Balf. and Forr.

Forrest No. 15851. A shrub 5 to 10 feet high, native to western Yunnan, China. The narrowly lanceolate leaves, 4 to 8 inches long, are green above and covered beneath with a loose whitish to buff woolly tomentum. The funnel-campanulate flowers, in clusters of 5 to 12, are 2 to 3 inches long and are bright geranium-scarlet dappled inside with darker spots.

97666. RHODODENDRON HAEMATODES Franch.

Forrest No. 6773. A shrub up to 10 feet high, native to Yunnan, China. The oblong to obovate leaves, 2 to 4 inches long, are dark green above and densely rufus-woolly-tomentose beneath. The fleshy tubular-campanulate flowers, in umbels of 6 to 8, are 2 inches long and have five pouches at the base of the crimson corolla.

97667. RHODODENDRON HODGSONII Hook. f.

This is considered one of the finest rhododendrons for foliage; the leathery dark-green leaves are up to 18 inches in length, glossy above and covered with a brown-red down beneath. The rosy lilac flowers, 2 inches wide, are in dense rounded trusses about 6 inches wide.

For previous introduction see 58924.

97668. RHODODENDRON INSIGNE Hemsl. and Wils.

Wilson No. 1339.

For previous introduction and description see 97395.

97669. RHODODENDRON LACTEUM Franch.

Forrest No. 6778. A tree 15 to 30 feet high, native to Yunnan, China. The thick leathery oblong-elliptic leaves, 4 to 7 inches long, are glabrous above and covered beneath with a dull-fawn suedelike indumentum. The wide-campanulate creamy white to canary yellow flowers are 2 inches long and are borne in a large racemose umbel made up of 20 to 30 flowers.

97657 to 97678—Continued

97670. RHODODENDRON NERIIFLORUM Franch.

A shrub 3 to 6 feet high, native to midwestern Yunnan, China. The oblong to oval leaves, 2 to 4 inches long, are dark-green and smooth above, and covered beneath with white waxy papillae. The fleshy tubular campanulate crimson flowers are about 2 inches long, and the calyx is fleshy and colored like the corolla.

97671. RHODODENDRON NIVEUM Hook. f.

A shrub or small tree 12 to 15 feet high, native to the Sikkim Himalayas in India. The branchlets are covered with dense white felty tomentum, and the obovate-lanceolate leaves, 4 to 6 inches long, are glabrous above and covered beneath with felty tomentum which is at first white but becomes grayish brown. The tubular-campanulate magenta flowers are over 1 inch long and are borne in a rounded compact mass of 15 to 20.

97672. RHODODENDRON ORBICULARE Decaisne.

For previous introduction and description see 97399.

97673. RHODODENDRON OREODOXA Franch.

A shrub or small tree, native to western Szechwan, China. The narrowly elliptic, leathery leaves, 2 to 4 inches long, are glabrous above and glaucous beneath. The openly campanulate pale-rose flowers are nearly 2 inches across and are borne in a racemose umbel of about a dozen flowers.

97674. RHODODENDRON PRAEVERNUM Hutchinson.

A medium-sized compact shrub, native to Hupeh, China. The leathery elliptic-oblanceolate leaves, 4 to 7 inches long, are dark green above and pale gray green below. The companulate flowers, 2 inches across, are white suffused rose with a large dark wine-red blotch at the base and smaller spots above, and are borne in a terminal umbel of about 10 flowers.

97675. RHODODENDRON ROYLEI Hook. f. (*R. cinnabarinum* Hook. f.).

Variety *Blandfordiaeflorum*. A form with the flowers red outside, like the type, but yellow or greenish yellow inside.

97676. RHODODENDRON SOULIEI Franch.

For previous introduction and description see 97403.

97677. RHODODENDRON THOMSONII Hook. f.

A Himalayan shrub up to 15 feet high, growing at altitudes between 10,000 and 11,000 feet, with glabrous obovate leaves 3 inches long and clusters of 6 to 8 blood-red flowers 2 inches across.

For previous introduction see 76911.

97678. RHODODENDRON VERNICOSUM Franch.

Forrest No. 5881. A spreading shrub 6 to 25 feet high, native to Szechwan and Yunnan, China. The thick leathery oblong-oval leaves, 3 to 5 inches long, are glabrous above and glaucous beneath. The widely funnel-campanulate flowers, 1 to 2 inches long, are white to bright-rose, sometimes with crimson markings, and are borne in racemose umbels of

97657 to 97678—Continued

about 10 flowers. The geographic form, *euanthum*, is reported to be hardly distinguishable from the type.

97679 to 97682. SYRINGA spp. Oleaceae.

From Canada. Scions presented by F. L. Skinner, Dropmore, Manitoba. Received February 26, 1932.

97679 to 97681. SYRINGA PRESTONIAE McKelvey. **Hybrid lilac.**

A collection of hybrids between *Syringa reflexa* and *S. villosa* developed at the Manitoba Nursery by Mr. Skinner.

97679. *Handel.* Flowers deep lilac rose, in a very heavy cluster.

97680. *Heloise.* Flowers pink fading to white.

97681. *Hiawatha.* A very dark rose-colored lilac, the same shade as *Rosa rugosa*.

97682. SYRINGA SWEGINZOWII Koehne and Ling. **Chengtu lilac.**

The sweginzowii hybrids have a more open panicle and are all very pale colored, usually white flushed with pink.

97683 to 97712.

From England. Plants purchased from Maurice Prichard & Sons, Ltd., Riverslea Nurseries, Christchurch, Hants. Received February 26, 1932.

97683 to 97697. CAMPANULA CARPATICA Jacq. Campanulaceae. **Carpathian bellflower.**

A collection of new varieties which flower in July and August.

97683. *Carillon.*

97684. *Chewton Joy.*

97685. *Claribel.*

97686. *Convexity.*

97687. *Cream Star.*

97688. *Mrs. V. Frere.*

97689. *Loveliness.*

97690. *Opal.*

97691. *Priory Bells.*

97692. *Queen of Somerville.*

97693. *Riverslea Giant.*

97694. *Riverslea Improved.*

97695. *The Pearl.*

97696. *Triumphant.*

97697. *Multiflora.*

97698 to 97705. ERICA spp. Ericaceae.

97698 to 97703. ERICA CARNEA L. **Spring heath.**

A spring heath which grows 8 inches high.

97698. *Mrs. S. Doncaster.* Flowers light pink.

97699. *King George.* A winter-flowering variety with bright rich-pink flowers.

97700. *Queen of Spain.* Flowers rosy red.

97701. *Praecox rubra.* A form which commences to bloom in January; the flowers are a very rich shade of pink.

97683 to 97712—Continued

97702. *Rubra.* Flowers deep ruby pink.

97703. *Vivelli.* A form with dark foliage and deep-rose flowers.

97704 and 97705. ERICA VAGANS L. **Cornish heath.**

97704. *Mrs. F. D. Maxwell.* Flowers deep salmon pink.

97705. *St. Keverne.* A new variety with pretty salmon-pink flowers.

97706. ERYNGIUM ALPINUM L. Apiaceae. **Bluetop eryngo.**

James Ivory. A wonderful form of *Eryngium alpinum* with large deep-blue feathery teazle-shaped flowers.

97707 to 97711. TRADESCANTIA spp. Commelinaceae. **Spiderwort.**

The tradescantias are showy border plants which grow up to 2 feet high and flower all through the summer.

97707. TRADESCANTIA sp.

Iris Pritchard. A variety with white flowers heavily stained with azure blue, and blue center. It grows 18 inches high and blooms in August and September.

97708. TRADESCANTIA sp.

James Crawford Weguelin. A plant 18 inches high, with large flowers of a uniform light azure blue.

97709. TRADESCANTIA sp.

James Stratton. A new variety with large flowers 2½ inches from tip to tip, deep delphinium mauve, slightly shaded with rose.

97710. TRADESCANTIA sp.

Leonora. The very fine flowers are a deep rich glowing violet.

97711. TRADESCANTIA sp.

Purewell Giant. An extremely effective variety with light mauve-blue flowers.

97712. VERBENA BONARIENSIS L. Verbenaceae.

A villous-hirsute herbaceous plant, 2 to 4 feet high, native to Brazil. The partly clasping leaves, 2 to 3 inches long, are serrate with broad teeth, and the small bright-purple flowers are borne in dense spikes.

97713 to 97739.

From Asia. Seeds presented by Capt. F. Kingdon Ward, London, England. Received February 27, 1932.

A collection of seeds of economic plants from the Adung Valley, Tibet, between 6,000 and 11,000 feet altitude.

97713. AMARANTHUS PANICULATUS L. Amaranthaceae. **Tassel amaranth.**

The seed is roasted or popped, ground into meal, and made into sweet cakes; the meal is also said to be eaten with sugar and milk.

For previous introduction see 64451.

97714 and 97715. BRASSICA RAPA L. Brassicaceae. **Turnip.**

97714. Collected at Jite.

97713 to 97739—Continued

97715. A large red-skinned species, more like a Swede than a turnip, full of sugar, flesh firm, hard in parts. Grown at 11,000 feet altitude in the R.dong district of southeastern Tibet. Harvested in September.

97716 and 97717. CHAETOCHLOA ITALICA (L.) Scribn. Poaceae. **Millet.**

97718. CHENOPODIUM ALBUM L. Chenopodiaceae.

97719. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

97720. ELEUSINE CORACANA (L.) Gaertn. Poaceae. **African millet.**

97721 and 97722. FAGOPYRUM TATARICUM (L.) Gaertn. Polygonaceae. **Kangra buckwheat.**

97723 to 97726. HORDEUM VULGARE COELESTE L. Poaceae. **Six-rowed barley.**

97723. Collected near the headwaters of the Irrawaddy in the Ridong district at 10,000 feet altitude.

97724. From Jite.

97725. Collected in the Adung Valley at 6,000 feet altitude.

97726. A variety grown locally.

97727. PERILLA FRUTESCENS (L.) Britton. Menthaceae. **Green perilla.**

97728. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

A variety grown locally.

97729 and 97730. PISUM SATIVUM L. Fabaceae. **Pea.**

97729. A variety with brown seeds.

97730. A variety with gray seeds.

97731. PRIMULA sp. Primulaceae. **Primrose.**

No. 10040.

97732. PRUNUS PADUS L. Amygdalaceae. **European bird cherry.**

Collected near the headwaters of the Irrawaddy, in a forest, between 10,000 and 12,000 feet altitude. A small tree with white flowers which are followed by small, rather tart, deep-red fruits.

97733. RIBES sp. Grossulariaceae. **Gooseberry.**

The Tibetan wild gooseberry collected in the outer conifer belt between 9,000 and 11,000 feet altitude. The fruit is small, hard, red, and inedible.

97734. RIBES sp. Grossulariaceae. **Red currant.**

A stout bush with edible fruit, collected in the forest region between 10,000 and 11,000 feet altitude.

97735 and 97736. SOJA MAX (L.) Piper. Fabaceae. **Soybean.**

97737 and 97738. TRITICUM TURGIDUM L. Poaceae. **Poulard wheat.**

97737. Collected at Jite.

97738. Collected in the Ridong district, between 10,000 and 11,000 feet altitude.

97739. ZEA MAYS L. Poaceae. **Corn.**

A variety grown locally.

97740 to 97745.

From the West Indies. Material collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 29, 1932.

97740. ARENGA ENGLERI Beccari. Phoenicaceae. **Palm.**

No. 2684. Collected in the Botanic Gardens, Dominica, Leeward Islands, January 29, 1932. A cluster palm with no trunk, which suckers from the ground and forms clumps 10 feet across. The pinnae are 16 inches long and over an inch wide and are fishtail shaped. The fruits are red and less than an inch in diameter.

97741. CALATHEA sp. Marantaceae.

No. 2730. Tubers presented by Mrs. Charles W. Doorley, from the garden of the Government House, St. Lucia, Windward Islands, February 3, 1932. The leaves of this perennial herb are wine colored in the center, and the flower spike 8 inches high is the same color. The calatheas are shade-loving and acid- or neutral-soil plants and useful only where they are given constant care.

97742 and 97743. DIOSCOREA spp. Dioscoreaceae.

Tubers purchased in the market at Dominica, Leeward Islands, January 29, 1932.

97742. DIOSCOREA ALATA L. **Winged yam.**

No. 2706. *The lady yam.*

97743. DIOSCOREA TRIFIDA L. f. **Yampie.**

No. 2705. *Cuscus yam.* A small yam which is delicious when baked and served with drawn butter.

97744. RAJANIA CORDATA L. (*R. pleioneura* Griseb.). Dioscoreaceae. **Cockscomb-yam.**

No. 2704. *Waw waw.* Tubers purchased in the market at Dominica, January 28, 1932. A species which grows wild in the wet lands of the island. It is not cultivated, probably because an abundance can be obtained by digging in the forest.

For previous introduction see 29129.

97745. HAEMANTHUS MULTIFLORUS Martyn. Amaryllidaceae.

Bulbs of the fire-lily or poison-lily; a flame of fire without leaves, very characteristic.

97746. CRYPTOMERIA JAPONICA (L. f.) D. Don. Pinaceae. **Common cryptomeria.**

From Japan. Seeds presented by Prof. Mitsunaga Fujioka, Division of Forestry, College of Agriculture, Tokyo Imperial University, Komaba, Tokyo. Received March 1, 1932.

A beautiful Japanese evergreen forest tree, growing to a height of 300 feet and attaining a diameter of 7 feet. It will withstand considerable frost.

For previous introduction see 91788.

97747. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

From the island of Guam. Plants presented by C. W. Edwards, director, Agricultural Experiment Station. Received October 20, 1926. Numbered in March, 1932.

Saipan. The fruit of this mango is much inferior to that of the *Carabao* and other leading mango varieties, but it is relatively very hardy. Seedlings come into bearing in from 4 to 5 years and it makes a good stock.

For previous introduction see 97265.

97748. DAHLIA ROSEA Cav. Asteraceae.

From Chile, South America. Tubers collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received March 8, 1932.

No. 28. Collected January 16, 1932 in a garden at Puerto Varas. A cultivated variety with double red flowers.

97749. BERBERIS PARVIFOLIA Sprague. Berberidaceae. **Barberry.**

From Sweden. Seeds presented by Hortus Bontanicus Bergianus, Stockholm. Received March 4, 1932.

A low shrub from western China, with half-evergreen, occasionally spiny-toothed leaves, golden-yellow flowers, and globose berries of a terra-cotta color.

For previous introduction see 67137.

97750 to 97790.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 29, 1932.

97750. ACACIA CUNNINGHAMII Hook. Mimosaceae.

No. 2659. Collected in the Botanic Garden on Antigua, Leeward Islands, January 26, 1932. A tree strikingly like a eucalypt in character; its phyllocadia much resemble the so-called leaves of that genus. The curious seed pods appear to be strung along the stems.

97751. ANACARDIUM OCCIDENTALE L. Anacardiaceae. **Cashew.**

No. 2725. Collected in the Botanic Garden on St. Lucia, Windward Islands, February 3, 1932. The cashew nut of commerce.

97752. BAUHINIA MONANDRA Kurz. Caesalpiniaceae. **Butterfly bauhinia.**

No. 2791. Collected February 8, 1932, on Carriacou, Grenadine Islands. An ornamental tropical African bush or small tree with handsome pink flowers variegated with yellow and spotted with red.

For previous introduction see 88512.

97753. BUCIDA BUCERAS L. Combretaceae.

No. 2653. *Whitewood.* Presented by the head gardener at the St. John's Botanic Garden, Antigua, January 26, 1932. A large handsome tree similar to No. 2601 (96502). Of probable value as a windbreak, as these trees are found on

97750 to 97790—Continued

the wind-swept hillsides of the islands, growing both on limestone and clay soils.

For previous introduction see 96502.

97754. CACARA EROSA (L.) Kuntze. Fabaceae. **Yam-bean.**

No. 2663. Collected January 24, 1932, on Mount Misery, Antigua. Found climbing over a tree in the rain forest.

97755 and 97756. CAJANUS INDICUS Spreng. Fabaceae. **Pigeonpea.**

Collected on Bequia, Grenadine Islands, February 5, 1932.

97755. No. 2742. *Willow stem.* A variety characterized by having its pods at the tips of the slender branches which hang over like willow twigs. It is grown as an annular crop for export, but is not considered so good a variety as the *Rose pea.*

97756. No. 2743. *Rose pea.* This is the favorite variety on Bequia Island. The dark-brown pods are in bunches at the tips of short branches; the seeds are light pinkish yellow.

97757. ANNESLIA TERGEMINA (L.) Britt. and Rose (*Calliandra tergemina* Benth.). Mimosaceae.

No. 2690. *Bois Ravine.* Collected January 29, 1932, in the Botanic Garden on Dominica, Leeward Islands. A shrub or small tree which makes an exceedingly attractive hedge and is in bloom most of the time. When the foliage first appears it is pink, turning to yellow green and later to dark green. The showy part of the flower is the bundle of stamens colored in bands of pink, white, and red.

For previous introduction see 55790.

97758. CANAVALIA MARITIMA (Aubl.) Thouars. Fabaceae.

No. 2612. Collected on Beata Island, Dominican Republic, January 11, 1932. A leguminous plant found growing on the beach of pure shell and limestone. It produces a good mat of foliage, and may be useful as a sand binder or as a green manure.

For previous introduction see 91236.

97759. CAPPARIS CYNOPHALLOPHORA L. Capparidaceae.

No. 2596. Collected at the base of Salt Pond Hill, Great Inagua, Bahamas, January 15, 1932. A handsome small tree with leaves that are glossy above and rusty scaly underneath. The fragrant flowers have long purple filaments, and the long straw-colored pods are borne on the long gynophore, the stalk of the pistil.

97760. CARICA PAPAYA L. Papayaceae. **Papaya.**

No. 2789. Purchased in the market at Roseau, Dominica, Leeward Islands, January 30, 1932. A small variety not larger than an orange, with bright salmon-colored flesh one half inch thick and the outside of an unusually brilliant color. The flesh is sweet with a delicious flavor.

97750 to 97790—Continued

97761. CHRYSOPHYLLUM BICOLOR Poir. Sapotaceae.

No. 2716. St. Antonie, St. Lucia, Windward Islands, February 3, 1932. A tree up to 50 feet high, with golden-silky twigs and leathery elliptic leaves 2 to 3 inches long, dark-green above and silvery beneath. The small flowers are borne in fascicles and are followed by the brown oblong edible fruits 1 to 2 inches long. It is native to the West Indies.

97762. TRIMEZA MARTINICENSIS (Jacq.) Herb. (*Cipura martinicensis* H. B. K.). Iridaceae.

No. 2655. Collected January 26, 1932, on Antigua, Leeward Islands. A yellow irislike plant 18 inches high with small round rhizomes having intensely yellow flesh, light-green leaves, and small yellow flowers. Found wild in the grass on the hillsides of McCarthy Valley, near Boggy Peak. Said to grow down almost to sea level in Antigua where it is endemic.

97763. CORDIA ALBA (Jacq.) Roem. and Schult. Boraginaceae.

No. 2635. *White manjack* or *Moral.* Collected on St. Kitts, Leeward Islands, January 23, 1932. An attractive evergreen tree about 30 feet high, with large light-green glossy leaves. The fruits are translucent, pinkish white, and very mucilaginous.

For previous introduction see 90911.

97764 and 97765. CRACCA spp. Fabaceae.

Collected January 29, 1932, in the Botanic Garden on Dominica, Leeward Islands.

97764. CRACCA CANDIDA (DC.) Kuntze (*Tephrosia candida* DC.).

No. 2721. A low shrub with slender branches and large clusters of reddish or white flowers. It is the preferred cover crop in the lime plantations of Dominica.

For previous introduction see 81413.

97765. CRACCA VILLOSA HIRTA (Buch.-Ham.) Kuntze (*Tephrosia hirta* Buch.-Ham.).

No. 2770. A low-growing species highly esteemed as a nitrifying legume for orchards.

For previous introduction see 76097.

97766. DATURA METEL FASTUOSA (L.) Safford. Solanaceae.

No. 2590. Collected in Nassau, New Providence Island, Bahamas, January 12, 1932. An ornamental herbaceous annual which varies in height from 2 to 6 feet. It has entire or deeply toothed leaves about 4 inches long and flowers 7 inches or more in length, varying in color from white to lavender or rose.

For previous introduction see 91416.

97767. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean.**

No. 2749. Collected near Grand Bay, Cannouan, Grenadine Islands. A variety with white seeds.

97768. HYMENAEA COURBARIL L. Caesalpiniaceae. **Courbaril.**

No. 2731. From St. Lucia, Windward Islands, February 3, 1932. A tall handsome tree with glossy leaves in pairs.

97750 to 97790—Continued

The large pods are very hard and contain a greenish powdery material that is edible. The willowy character of the twigs should make it a good tree to plant in hurricane regions.

For previous introduction see 47559.

97769. IPOMOEA POLYANTHES Roem. and Schult. Convolvulaceae. **Morning-glory.**

No. 2780. Collected January 30, 1932 in Dominica, Leeward Islands. A yellow-flowered morning-glory.

97770. IXORA LUTEA Hutch. Rubiaceae.

No. 2668. Collected in the Botanic Garden, Dominica, January 28, 1932. A glabrous shrub with sessile or subsessile leaves, oblong, with rounded or cordate base and sometimes an acuminate top. It differs from *I. coccinea* by having a laxer inflorescence and pale yellow flowers with larger ovate-rhomboid corolla lobes.

97771. JASMINUM AZORICUM L. Oleaceae. **Azores jasmine.**

No. 2787. Collected at Orangetown, St. Eustatius Island, Dutch West Indies. A slender vine forming a mass of dark gray-green foliage and bearing long white tubular fragrant 7-parted flowers in loose cymes. The berries are black.

For previous introduction see 43802.

97772. LAWSONIA INERMIS L. Lythraceae. **Henna.**

No. 2660. Presented by the head gardener of the Botanic Gardens, Antigua, Leeward Islands. This is the henna bush of the Orient, used by women to stain their finger nails. The foliage contains an orange dye. This bush is considered one of the best hedge plants here, comparable to *Dodonea viscosa*.

97773. LOBELIA PERSICAEFOLIA Lam. Campanulaceae.

No. 2674. Collected along the roadside at 1,200 feet altitude in Dominica, Leeward Islands, January 31, 1932. A perennial herb with a rather weedy appearance and brilliant crimson flowers.

97774. MYRISTICA FRAGRANS Houtt. Myristicaceae. **Common nutmeg.**

No. 2739. Collected February 4, 1932, in the Botanic Garden at St. Vincent, Windward Islands.

For previous introduction and description see 97573.

97775. OPUNTIA sp. Cactaceae.

No. 2667. Collected on St. Kitts, Leeward Islands, January 23, 1932. A small handsome unusually attractive form with few spines, almost smooth, and peach red fruits with red flesh which is sour but refreshing.

97776. PASSIFLORA SUBEROSA L. Passifloraceae. **Cork passionflower.**

No. 2625. Collected on Saona Island, Dominican Republic, January 20, 1932. Several of the small-fruited passifloras are valued as ornamentals, and this woody climber properly comes under that class. The small flowers are green, and the fruit is a black berry.

For previous introduction see 91827.

97750 to 97790—Continued

97777. PASSIFLORA QUADRANGULARIS L. Passifloraceae. **Giant granadilla.**

No. 2645. From St. Kitts, January 24, 1932. A vine with large very luscious fruits, growing in acid soil.

97778. PITCAIRNIA BRACTEATA Ait. Bromeliaceae.

No. 2767. Collected on St. Vincent, February 4, 1932. A very short-stemmed shrubby plant resembling a billbergia, with a dense rosette of narrow somewhat spiny leaves and a central spike-like raceme of red or yellow flowers. It is native to St. Vincent.

97779. PITCAIRNIA COCCINEA Hort. Bromeliaceae.

No. 2723. A very striking ornamental with lax sprays of large tubular scarlet flowers which rise from a mass of typical bromelialike leaves, collected in the Botanic Garden, Dominica, Leeward Islands.

97780. ALBIZZIA BERTERIANA (Balb.) Fawcett and Rendle (*Pithecollobium berterianum* Benth.). Mimosaceae.

No. 2747. Collected in the Botanic Garden, St. Vincent, March 4, 1932. A tree over 100 feet high with smooth gray bark, long tough branches, and small rather thin foliage which offers no resistance to the West Indian hurricanes. It does not cast a dense shade, but its clean gray buttressed trunk is most attractive and suited for large avenue effects and as a stately tree in parks.

97781 and 97782. PLUMERIA OBTUSA L. Apocynaceae.

A handsome small tree with dark-green leathery leaves and rather small white flowers with a yellow eye.

97781. No. 2570. Collected on Rum Key, Bahama Islands, January 6, 1932.

97782. No. 2627. Collected on Beata Island, Dominican Republic, January 27, 1932.

97783. QUAMOCLIT COCCINEA (L.) Moench. Convolvulaceae. **Scarlet starglory.**

No. 2768. Collected at the Government House, St. Lucia, Windward Islands, February 3, 1932. A vine with entire cordate leaves over 2 inches long and 2 inches wide and many brilliant scarlet flowers with the corolla tube curved.

97784. RANDIA FORMOSA (Jacq.) Schum. Rubiaceae.

No. 2664. Collected in the Botanic Garden, Dominica, Leeward Islands, January 28, 1932. An attractive flowering shrub with long white fragrant flowers. Each flower has a long slender tube and flat salver-shaped corolla. The small fruits are striped different tints of greenish yellow and are about the size of a gooseberry. They are said to be edible.

97785. SOLANUM MAMMOSUM L. Solanaceae.

No. 2741. Collected February 3, 1932, on St. Lucia. A strikingly ornamental, very spiny shrub, covered with large globose orange-colored fruits over 2 inches in diameter. The fruits are said to be poisonous, and evidently cattle and sheep do not touch them.

For previous introduction see 90935.

97750 to 97790—Continued

97786. STYLOSANTHES HAMATA (L.) Taub. Fabaceae.

No. 43. Collected January 23, 1932, at Orangetown, St. Eustatius Island, Dutch West Indies.

For previous introduction and description see 96517.

97787. TABEBUIA LEUCOXYLA DC. Bignoniaceae.

No. 2646. *White cedar.* Collected January 24, 1932, on St. Kitts, Leeward Islands.

For previous introduction and description see 97579.

97788. TABEBUIA PENTAPHYLLA (L.) Hemsl. Bignoniaceae.

No. 2647. Collected January 26, 1932, in the Botanic Gardens at St. Johns, Antigua, Leeward Islands. A handsome tropical deciduous tree about 35 feet high, native to Central America. During its flowering period, from January to March, the numerous large clusters of pink flowers make this tree very attractive.

For previous introduction see 81429.

97789. TAMARINDUS INDICA L. Caesalpiniaceae. **Tamarind.**

No. 2748. Collected February 6, 1932, on Bequia, Grenadine Islands. A large-fruited tamarind with pods nearly 6 inches long and over an inch in diameter; they are thin skinned and rich in pulp of a delicate flavor. The pods are used in the manufacture of tamarind sirup. The young trees bear larger pods than the old trees.

97790. TILLANDSIA UTRICULATA L. Bromeliaceae.

No. 2644. Collected January 5, 1932, on Conception, Bahamas. An immense species with flower clusters said to be 8 to 10 feet high.

97791. LINUM USITATISSIMUM L. Linaceae. **Flax.**

From Africa. Seeds presented by the Agricultural Department, Nairobi, Kenya Colony, through Simpson & Whitelaw, Ltd., seed merchants, Nairobi. Received March 5, 1932.

Locally grown linseed introduced for the use of Department specialists.

97792 to 97799.

From Palestine. Seeds presented by the deputy director, Department of Agriculture, Forests, and Fisheries, American Colony, Jerusalem. Received March 5, 1932.

97792 to 97797. TRIFOLIUM spp. Fabaceae. **Clover.**

97792. TRIFOLIUM CAMPESTRE Schreb.

A biennial or annual clover up to about 20 inches high, prostrate or ascending, with bright-yellow flowers. It is native to central Europe.

For previous introduction see 78808.

97793. TRIFOLIUM CLYPEATUM L.

For previous introduction see 28792.

97792 to 97799—Continued

97794. TRIFOLIUM LAPPACEUM L.

This plant is one of the less vigorous of the genus. It has a somewhat reclining habit of growth; the rather soft and delicate stems are seldom more than 12 or 15 inches long.

For previous introduction see 31057.

97795. TRIFOLIUM LOISELEURI Rouy (*T. purpureum* Loisel., not Gilib.).

An annual clover, closely related to *T. angustifolium*, but differing in having somewhat broader leaflets and shorter flower heads. Native to sandy places in the fields of central Europe.

97796. TRIFOLIUM SCUTATUM Boiss.

An annual clover with erect or procumbent stems up to a foot high, narrow obovate leaflets, and yellow flower heads. Native to Asia Minor.

97797. TRIFOLIUM LOISELEURI Rouy (*T. purpureum* Loisel., not Gilib.).

For previous introduction and description see 97795.

97798. ZIZIPHUS JUJUBA Mill. Rhamnaceae. **Common jujube.**

A tree with small brownish fruits from 1 to 2 inches in length.

For previous introduction see 90297.

97799. ZIZIPHUS SPINA-CHRISTI (L.) Willd.

A small tree with bright-green cordate leaves and ovoid fragrant red-brown fruits, the size of a hazel nut.

97800. PISTACIA VERA L. Anacardiaceae. **Pistache.**

From Syria. Scions presented by Arshak Maroukian, through Sahac Sahacian, Bab-el-Faraj, Aleppo. Received March 7, 1932.

A good variety, collected in the vicinity of Aleppo.

97801 to 97803.

From Africa. Seeds presented by P. R. L. Putnam, Penje, Avakubi, Belgian Congo. Received March 7, 1932.

97801. CUCURBITA MOSCHATA Duchesne. Cucurbitaceae. **Cushaw.**

An edible hard-shelled squash.

97802. RANDIA sp. Rubiaceae.

A shrub growing both in the dense forest and on village plazas. The flowers are ornamental, and the full-grown but unripe fruit is beaten to a pulp and used by the natives to paint designs on their bodies. When dry the juice becomes jet black and cannot be removed for several days.

97803. SARCOPHRYNIUM sp. Marantaceae.

A shrub found in the less shady parts of the forest. Clumps of the leaves are ornamental, as are also the bright-red seed capsules which are 3-chambered, each chamber containing one seed. The broad durable leaves are used by the natives for thatching their huts; the skin of the stems of the leaves makes excellent smooth mats; the shoots are boiled or fried as a vegetable and the seeds are roasted and eaten.

97804 to 97816. Phoenicaceae. **Palm.**

From the West Indies and British Guiana. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 7, 1932.

97804. (Undetermined.)

No. 2956. Collected February 19, 1932, in the Botanic Station at Scarborough, Tobago. A graceful feather palm with a smooth trunk 15 feet high and 6 inches in diameter. The fruits are oblong cylindrical, pointed, 1 inch long by 1½ inches in diameter.

97805. ARCHONTOPHOENIX ALEXANDRAE (F. Muell.) Wendl. and Drude.

No. 2983. Collected February 25, 1932, in the Botanic Garden, Georgetown, British Guiana. A pinnate-leaved palm 70 to 80 feet high, with leaves several feet long, of lanceolate, usually entire leaflets, 1 to 2 feet long and whitish beneath. The green-yellow flowers are borne in a cluster about 1 foot long and are followed by small round fruits. It is native to Queensland, Australia.

For previous introduction see 91772.

97806. PTYCHOSPERMA sp.

No. 2953. Collected February 19, 1932, in the Botanic Station, Scarborough, Tobago. An attractive cluster palm whose pinnate leaves have obliquely truncated pinnae.

97807. ARECA TRIANDRA Roxb.

No. 2954. Collected February 19, 1932, in the Botanic Station, Scarborough, Tobago. A graceful spineless palm ultimately about 25 feet high, usually with several trunks which bear crowns of pinnate leaves 4 to 6 feet in length. The fruits, about the size of an olive, are orange-scarlet. Native to India.

For previous introduction see 93400.

97808. ASTROCARYUM TUCUMA Mart.

No. 2986. Purchased in the market at Georgetown, British Guiana, February 25, 1932. The orange-colored fruits, the shape of acorns, have oily flesh which is a deep orange color and full of fiber, but has a sweetish and somewhat nutty flavor.

97809. ASTROCARYUM SEGREGATUM Drude.

No. 2987. Purchased in the market at Georgetown, British Guiana, February 23, 1932. A rather low-growing Brazilian palm with a spiny trunk and large pinnate leaves armed with stout black spines along the midribs. The fragrant smooth oily fruits, over an inch in diameter, have yellow-orange flesh with very little fiber and a flavor something like a hazel nut.

97810. ASTROCARYUM sp.

No. 2957. Collected on Tobago, Windward Islands, February 20, 1932. A very spiny slender palm found on the mountain side at 1,000 feet altitude.

97811. COPERNICIA CERIFERA Mart. **Carnauba palm.**

No. 2977. From the Botanic Garden, Georgetown, British Guiana, February 25, 1932. The wax palm of Brazil, which has fan-shaped leaves and grows

97804 to 97816—Continued

to a height of 25 feet. From the leaves is obtained carnauba wax, which is used in making phonograph records.

For previous introduction see 71917.

97812. DESMONCUS sp.

No. 2951. Collected February 16, 1932, in the Forest Reserve, Trinidad. A climbing palm, covered with spines, found in the deep forest. The bunches of deep-scarlet fruits are very attractive.

97813. EUTERPE OLERACEA Mart.

No. 2955. Collected on Tobago, Windward Islands, February 20, 1932. A graceful palm with a trunk seldom more than 4 inches in diameter. It is said that fats suitable for oils and soaps can be derived from its blue-black berrylike fruits.

For previous introduction see 50481.

97814. HYPHAENE THEBAICA (L.) Mart. **Doum palm.**

No. 2980. Collected in the Botanic Gardens, Georgetown, British Guiana, February 25, 1932. A palm about 30 feet high which is noted as one of the few branching palms. It grows in alkaline sandy and clay soils and is distributed from upper Egypt to central Africa. The stems of old trees are sometimes forked 3 or 4 times. The beautiful yellowish-brown fruits are borne in long clusters of one to two hundred. In upper Egypt people of the poorer classes eat the fibrous husk, which tastes much like gingerbread, but is rather hard. The hard tough wood is used for domestic utensils. It is one of the most striking and picturesque of the palms and is capable of withstanding severe droughts under desert conditions, as well as the moisture-laden atmosphere of British Guiana.

For previous introduction see 85741.

97815. LICUALA GRANDIS (Bull.) Wendl.

No. 2978. Collected in the Botanic Garden, Georgetown, British Guiana February 25, 1932. A dwarf palm with the stem clothed with the dead leaf sheaths. The erect spreading fan-shaped leaves have closely plicate segments which are two-lobed at the end. Native to the island of New Pommern, Bismarck Archipelago.

For previous introduction see 81589.

97816. LIVISTONA HOOGENDORPII Andre.

No. 2982. Collected in the Botanic Garden, Georgetown, British Guiana, February 25, 1932. A form with blue fruits. A tall Javanese palm with fan-shaped leaves 4 to 6 feet wide on spiny petioles, 3 to 5 feet long, red-brown at the base and becoming olive green near the blade. The blades are made up of 10 to 12 plicate pendulous segments, with five to seven acute lobes at the apex.

For previous introduction see 95088.

97817 and 97818.

From India. Seeds presented by D. N. Mahta, second economic botanist, Central Province, at the request of the director of agriculture Nagpur. Received February 26, 1932.

97817. ALYSICARPUS RUGOSUS (Willd.) DC. Fabaceae.

An erect annual legume, native to southern Asia and Africa. The tough

97817 and 97818—Continued

stems are 3 to 4 feet high, and the roots bear nitrogen nodules.

For previous introduction see 71803.

97818. INDIGOFERA LINIFOLIA (L. f.) Retz. Fabaceae. **Indigo.**

A legume with fine stems and numerous small leaves, growing to a height of 6 to 8 inches. Considered one of the best pasture plants of the Ganges Valley.

For previous introduction see 33608.

97819. CAPSICUM ANNUUM L. Solanaceae. **Common redpepper.**

From India. Seeds presented by W. O'Brien, Hyderabad, Deccan. Received March 11, 1932.

Goa chillie. Grown in Goa, Portuguese India.

For previous introduction and description see 96492.

97820 and 97821.

From the West Indies. Material collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 15 1932.

97820. DIOSCOREA ESCULENTA (Lour.) Burkill. Dioscoreaceae. **Lesser yam.**

No. 2878. Tuber collected in the Botanic Garden, Trinidad, February 15, 1932. A smooth-skinned, white-fleshed yam with the sweetish taste characteristic of most varieties of this species. The single tuber received is roughly cylindrical and of good size, weighing 15 ounces and measuring 8 inches long by nearly 3 inches thick.

97821. ZINZIBER OFFICINALE Roscoe. Zinziberaceae. **Ginger.**

No. 2891. Roots of Jamaica ginger, purchased in the market at Trinidad, February 17, 1932.

97822. TUBRAEA OBTUSIFOLIA Hochst. Meliaceae.

From Los Angeles, Calif. Seeds presented by P. D. Barnhart. Received March 8, 1932.

An attractive dwarf evergreen shrub, native to southern Africa, 4 to 6 feet high, which bears, between October and March, an abundance of white flowers which have strap-shaped petals 2 inches long. When in bloom the pure white flowers cover the plant and it is a veritable bouquet. When the capsules dehisce, the pretty seeds remain in the valves; hence whether the plant is in flower or in fruit, it is an ornament to any garden.

For previous introduction see 80214.

97823. PSEUDOPHOENIX SARGENTI Wendl. Phoenicaceae. **Palm.**

From the West Indies. Seeds collected by G. G. Albury, commissioner, The Bight, Cat Island, Bahamas, at the request of Dr. Fairchild. Received March 21, 1932.

For previous introduction and description see 96488.

97824 to 97827.

From the West Indies. Material collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 7, 1932.

97824. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

No. 2928. Suckers of a wild pineapple found along the roadside in the eastern part of Trinidad. It grows in light sandy soil which is seldom dry and where it is not exposed to the intense sunlight for more than a few hours a day. May be useful for breeding purposes.

97825 to 97827. CITRUS spp. Rutaceae.

97825. CITRUS AURANTIFOLIA (Christm.) Swingle. **Lime.**

No. 2942. From Charlotteville, Tobago, Windward Islands.

97826. CITRUS MEDICA L. **Citron.**

No. 2933. From the market at Port-of-Spain, Trinidad, February 18, 1932. A fruit with very thick, golden-yellow skin, acid yellow flesh, and very small seeds.

97827. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

No. 2931. From the Scarborough Botanic Station, Tobago, February 19, 1932. A locally selected seedling of exceptionally good flavor, but very seedy and not very juicy.

97828 and 97829.

From Madagascar. Seeds presented by R. Decary, Ambovombe, through C. F. Swingle, Bureau of Plant Industry. Received March 16, 1932.

97828. EUPHORBIA sp. Euphorbiaceae.

Collected in December 1930 in the Administrator's garden at Ambovombe.

97829. (Undetermined.)

Fengotra or *fingoka.* A large tropical tree, native to Madagascar, which resembles the Royal poinciana (*Delonix regia*). The trunk sometimes attains a diameter of over 3 feet. The leaves appear in October (in Madagascar), and the flowers are borne in December. The pod becomes 16 inches long.

97830. CITRUS sp. Rutaceae.

From the Union of Soviet Socialist Republics. Seeds presented by Maj. C. R. Olberg, Tiflis, Transcaucasia. Received March 21, 1932.

A wild lemon which is used as a stock on which to bud the mandarin orange.

97831 to 97833. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Scions presented by Sanichi Ishihara, Agricultural Experiment Station, Gifu Ken. Received March 14, 1932.

97831. *Ginyose.*

97832. *Kanotsume.*

97833. *Kasahara Wase.*

97834 to 97852.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 7, 1932.

97834. APEIBA TIBOURBOU Aubl. Tiliaceae.

No. 2945. Collected at Charlotteville, Tobago, Windward Islands, February 21, 1932. *Monkey comb.* A tree with light soft wood and seed pods which resemble sea urchins, as they are covered with long brittle spines. Through an opening in the top may be seen the small gray seeds peculiarly marked with a black spot. The tree is rare on the island of Tobago, but is said to be quite common in the Canal Zone.

97835. BARYXYLUM INERME (Roxb.) Pierre (*Peltophorum ferrugincum* Benth.). Caesalpiniaceae.

No. 2934. Collected in the Botanic Garden at Tobago, February 18, 1932. A large handsome leguminous tree bearing large terminal spikes of bright-yellow flowers. A good shade tree.

97836. BEGONIA sp. Begoniaceae.

No. 2924. A wild, vigorous-growing species with small white flowers, collected in the Roseau River Canyon, Dominica, Leeward Islands.

97837. CAESALPINIA CORIARIA (Jacq.) Willd. Caesalpiniaceae. **Divi-divi.**

No. 2821. Collected February 10, 1932 in the Botanic Garden, Grenada, Grenadine Islands. A leguminous tree, able to grow under almost arid conditions in tropical countries. The pods are very rich in tannin and for years have formed an important source of tanning material.

For previous introduction see 69397.

97838. CALOPHYLLUM ANTILLANUM Britton (*C. calaba* Jacq.). Clusiaceae. **Calaba-tree.**

No. 2815. From Grenada, February 10, 1932. A large native tree, up to 100 feet high. The dark-green leathery elliptic-oblong leaves are 3 to 6 inches long, and the small white fragrant flowers, borne in small racemes, are followed by hard-shelled fruits about 1 inch in diameter.

97839. CITHAREXYLUM SPINOSUM L. Verbenaceae.

No. 2737. Collected February 3, 1932, on St. Lucia, Windward Islands. *Susana.* A tree 60 feet high which is a close relative of the fiddlewood (*C. fruticosum*), but with shining black berries which make it a more decorative tree. It is used as a shade tree.

For previous introduction see 43651.

97840. CLERODENDRUM FALLAX Lindl. Verbenaceae.

No. 2923. From Port-of-Spain, Trinidad, February 18, 1932. A large shrub with heart-shaped velvety leaves 10 to 12 inches in diameter. The bright-scarlet flowers, on red stalks, are followed by very decorative dark-blue fruits. The shrub is used as a border plant with striking effect.

For previous introduction see 33767.

97834 to 97852—Continued

97841. TONTANEA GUIANENSE Aubl. (*Coccosipsilum guianense* Schum.). Rubiaceae.

No. 2918. Collected in the St. Andrews district, Trinidad, February 18, 1932. A partly trailing herb growing over the ground in the moist forest. It bears gorgeous bright royal-blue berries and would be a most attractive plant for use in moist shady borders.

97842. CORDIA ALLIODORA (Ruiz and Pav.) Cham. Boraginaceae.

No. 2863. Collected in Trinidad, February 17, 1932. The so-called *Cypre* of Trinidad. A large tree which becomes 8 or 9 feet in diameter and is conspicuous on the landscape with its gray-white flowers which exhale a faint perfume. As it grows in the drier parts of Trinidad, it may prove a good street tree in the southern United States.

97843. COSTUS sp. Zinziberaceae.

No. 2925. From the Arena Forest, Trinidad, February 16, 1932. A large coarse-leaved undershrub found in the rain forest of Trinidad. Its conelike inflorescence is rather attractive.

97844. ERIOSEMA VIOLACEA (Aubl.) Don. Fabaceae.

No. 2894. Collected February 17, 1932, on the Mausica Savanna, Trinidad. A promising perennial legume for wet lands with high water table. It grows over 4 feet high, and the upright woolly branches are rather sparsely set with foliage.

97845. FICUS sp. Moraceae. **Fig.**

No. 2794. Collected on Carriacou, Grenadine Islands, February 8, 1932. A medium-sized tree found on a hillside, exposed to the trade winds which sweep over the island. The light-green leathery leaves, 4 to 6 inches long, have prominent midribs. The branches are covered with very decorative small figs. Each fig has red-brown patterns of spots and areoles about each spot, giving it a most charming appearance.

97846. GEOPHILA HERBACEA (Jacq.) Schum. Rubiaceae.

No. 2903. From the Botanic Garden, Trinidad, February 15, 1932. A woody creeper that grows in the woods among roots and makes an attractive cover. The white flowers are followed by red berries. It may prove useful in borders in shady places where water is abundant.

97847. ICHTHYOMETHIA PISCIPULA (L.) Hitchc. Fabaceae.

No. 2790. From Carriacou, February 8, 1932. An attractive leguminous shade tree of spreading habit which becomes 50 feet high with clean gray trunks and large pinnate leaves. The large racemes of pale-pink flowers appear before the leaves and somewhat resemble the black locust. The wood is used for cart building.

97848. IXORA sp. Rubiaceae.

No. 2902. From Port-of-Spain, Trinidad, February 16, 1932. An unrecorded hybrid of Eugene André's creation. The flowers are light pink, with half of the under side of each petal pink and the other half white. Presented by his daughter, Mrs. Nora C. Fill.

97834 to 97852—Continued

97849. KIGELIA PINNATA (Jacq.) DC. Bignoniaceae.

No. 2666. From the Botanic Garden, Dominica, Leeward Islands, January 28, 1932. The sausage tree of Abyssinia. A good shade tree with leaves rough like sandpaper and pendent flower spikes 8 feet long. It is a very curious tree when in bloom.

For previous introduction see 52170.

97850. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

No. 2896. From the Cotton Research Station, St. Augustine, Trinidad, February 17, 1932. Supposed to be the original wild tomato of the Peruvian Andes.

97851. SCUTELLARIA VENTENATII Hook. Menthaceae. **Skullcap.**

No. 2824. From the Botanic Garden, Port-of-Spain, Trinidad, February 2, 1932. A plant with very beautiful deep-crimson flowers which is used as a border plant in the Botanic Garden. It resembles sage, but is not quite as showy.

97852. SOLANUM MACRANTHUM Dunal. Solanaceae.

No. 2946. From Trinidad, February 16, 1932. *Potato tree.* A very rapid-growing tree with large dark-green spiny leaves and a great profusion of large blue-violet flowers which change color from day to day, becoming a pale blue and later fading to white.

97853 to 97859.

From China. Seeds and scions collected by Peter Liu, Hopeh Province. Received March 10, 1932.

All material, except 97853 and 97855, was collected at Panshan, northwest of Chichow, Hopeh Province.

97853 to 97857. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

97853. Seeds collected at Tsunhuachow.

97854. Scions of the *Early chestnut.*

97855. *Huchiuyu.* Scions collected in the village north of Chichow.

97856. Scions of the *Late chestnut.*

97857. Scions of *Ju Jou Li,* meaning one chestnut only in each thorny coat.

97858. DIOSPYROS KAKI L. f. Diospyraceae. **Kaki persimmon.**

Scions of a large-fruited persimmon.

97859. PYRUS sp. Malaceae. **Pear.**

Scions of the *Honey* pear.

97860 to 97909.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received February 29, 1932.

97860. ABELMOSCHUS MOSCHATUS Medic. Malvaceae.

No. 2786. Collected on St. Lucia, Windward Islands, February 3, 1932. *Wild okra.* An ornamental annual 3 to 12 feet high, which bears large light-yellow flowers with deep dark-chocolate purple spots in the throat.

97860 to 97909—Continued

97861. ACACIA SCORPIOIDES (L.) W. F. Wight (*A. arabica* Willd.). Mimosaceae.

No. 2761. From Cannouan, Grenadine Islands, February 6, 1932. An attractive tree with yellow flowers followed by moniliform gray flattened pods.

97862. ALBIZZIA sp. Mimosaceae.

No. 2795. Collected February 8, 1932, on Carriacou, Windward Islands. A strikingly beautiful tree over 50 feet high and 18 inches in diameter, with gray bark and delicate fine pinnate leaves. The abundance of dry pods reminds one of the lebbek tree.

97863. ASYSTASIA GANGETICA (L.) T. Anders. Acanthaceae.

No. 2718. Collected on St. Lucia, February 3, 1932.

For previous introduction and description see 97255.

97864. BAUHINIA sp. Caesalpiniaceae.

No. 2764. From Cannouan, February 6, 1932. A spiny bush 20 feet high with very slender branches and small leaves. The flowers are said to be white.

97865 and 97866. BRADBURYA VIRGINIANA (L.) Kuntze (*Centrosema virginianum* Benth.). Fabaceae. **Piedmont butterfly-pea.**

A long podded vigorous legume, similar to the rice bean.

97865. No. 2722. Collected from a trellis at Government House, St. Lucia, February 3, 1932.

97866. No. 2778. Collected along the roadside on Bequia, Grenadine Islands, February 5, 1932.

97867. CALOPOGONIUM ORTHOCARPUM Urban. Fabaceae.

No. 2785. From the Botanic Garden, Dominica, Leeward Islands, January 29, 1932. A small-podded variety which is used as a cover crop in the island.

97868. CASSIA NODOSA Buch.-Ham. Caesalpiniaceae.

No. 2779. Collected on St. Lucia, February 5, 1932. A moderate-sized deciduous tree with long drooping branches and glossy leaves; in the spring it bears a profusion of beautiful pink rose-scented flowers in dense clusters on long stalks. The leaves and flowers appear at the same time.

For previous introduction see 93777.

97869. CASUARINA TRIANGULARIS Hort. Casuarinaceae.

No. 2740. Collected in the Botanic Gardens, Dominica, January 29, 1932. A striking species of this genus with a crooked angular trunk. The so-called leaves are finer and of a gray-green cast, and the pods are a little larger than those of *C. equisetifolia.*

97870. CRACCA VILLOSA HIRTA (Buch.-Ham.) Kuntze (*Tephrosia hirta* Buch.-Ham.). Fabaceae.

No. 2658. From the Botanic Garden, Roseau, Dominica, January 27, 1932.

For previous introduction and description see 97765.

97860 to 97909—Continued

97871. CRACCA VILLOSA PURPUREA (L.) Kuntze (*Tephrosia purpurea* Pers.). Fabaceae.

No. 2783. *Wild senna.* Collected January 23, 1932, at Basseterre, St. Kitts, Leeward Islands. A legume with red-purple flowers, which appears promising as a cover crop.

For previous introduction see 88150.

97872 to 97880. CROTALARIA spp. Fabaceae.

97872. CROTALARIA INCANA L.

No. 2633. Collected January 21, 1932, on a roadside on St. Eustatius, Dutch West Indies. A tall yellow-flowered trifoliolate species.

For previous introduction see 75879.

97873 and 97874. CROTALARIA RETUSA L.

For previous introduction see 88151.

97873. No. 2774. Collected February 5, 1932, on Cannouan. A pubescent species with simple leaves and yellow flowers.

97874. No. 2777. Collected February 5, 1932, on Bequia. A yellow-flowered species.

97875. CROTALARIA USARAMOENSIS Baker f.

No. 2772. Collected at the Experiment Station near Castries, St. Lucia, February 2, 1932. A leguminous plant which forms a dense low growth and endures partial shade.

For previous introduction see 91469.

97876. CROTALARIA VERRUCOSA L.

No. 2773. Collected February 5, 1932, on Bequia. A small weedy looking species with entire pubescent leaves and blue flowers. It may have drought-resistant characteristics.

For previous introduction see 81518.

97877. CROTALARIA sp.

No. 2630. Collected on Monkey Hill, St. Kitts, January 23, 1932.

97878. CROTALARIA ANAGYROIDES H. B. K.

No. 2642. Collected on St. Kitts, January 24, 1932. A shrubby vigorous species over 7 feet high, with mucronate pubescent trifoliolate leaves and terminal inflorescence of brilliant yellow flowers.

For previous introduction see 91468.

97879. CROTALARIA RETUSA L.

No. 2652. From St. Kitts, January 24, 1932.

For previous introduction and description see 97874.

97880. CROTALARIA sp.

No. 2649. Collected on St. Eustatius, January 29, 1932. A species with gray leaves.

97881. DATURA METEL FASTUOSA (L.) Safford. Solanaceae.

No. 49. Collected on Cannouan, February 6, 1932.

For previous introduction and description see 97766.

97860 to 97909—Continued

97882. DOLICHOLUS sp. Fabaceae.

No. 2640. Collected on St. Kitts, January 23, 1932. A climbing legume with yellow flowers.

97883. PHASEOLUS ADENANTHUS G. Meyer. Fabaceae.

No. 2775. Collected February 3, 1932, on St. Lucia. A climbing legume with pods over 3 inches long. Flowers not seen.

97884. GUILANDINA OVALIFOLIA (Urban) Britton. Caesalpiniaceae.

No. 2603. Collected on Beata Island, Dominican Republic. A very prickly vine which is one of the few that can stand the constant salt breezes of the coast. It differs from *Guilandia bonduc* in having perfectly globular golden-brown seeds.

97885 and 97886. INDIGOFERA SUFFRUTICOSA Mill. Fabaceae. **Indigo.**

A slender, yellow-flowered bushy legume, 3 to 5 feet high, producing a rather scanty growth, which is not considered one of the best cover crops.

For previous introduction see 67845.

97885. No. 2634. Collected January 22, 1932, on St. Eustatius, where it was found growing wild.

97886. No. 2661. Collected January 26, 1932, in the Botanic Garden at Roseau, Dominica.

97887. TERAMNUS LABIALIS (L.) Spreng. Fabaceae.

No. 2769. Collected February 3, 1932, on St. Lucia. A legume found growing on the dry side of the island. It twined up over the tall grasses, and its great productiveness and the vigor of its growth are in its favor as a cover crop, although there is little substance in its foliage.

97888. JASMINUM AZORICUM L. Oleaceae. **Azores jasmine.**

No. 2592. Collected at Nassau, New Providence, Bahamas, January 10, 1932.

For previous introduction and description see 97771.

97889. MEIBOMIA sp. Fabaceae.

No. 2782. Collected on Dominica, January 30, 1932. A decumbent species with very small trifoliolate leaves. It is found commonly in the pastures of several of the British West Indies.

97890. MYROSPERMUM FRUTESCENS Jacq. Fabaceae.

No. 2784. *Cercipo tree.* Collected in the Botanic Garden, Dominica, January 29, 1932. A large tropical-American leguminous tree with showy white flowers. It is worth a trial for street and park purposes.

97891. PENNISETUM SETOSUM (Swartz) L. Rich. Poaceae.

No. 2662. Collected on St. Kitts, January 24, 1932. Said to be a valuable pasture grass.

For previous introduction see 92940.

97892 to 97896. PHASEOLUS spp. Fabaceae. **Bean.**

97892 and 97893. PHASEOLUS LATHYROIDES L.

Collected on St. Lucia, February 2 and 3, 1932.

97860 to 97909—Continued

97892. No. 2719. A wild legume with small green seeds and narrow dark-brown pods; collected in the grounds of the experiment station.

97893. No. 2771. Collected on the roadside. A dark dusky red-flowered legume of rather scraggly habit. Not very promising looking as a cover crop, but it may be quite decorative under culture.

97894 and 97895. PHASEOLUS VULGARIS L. Common bean.

No. 2586. Collected on Eleuthera, Bahama Islands, January 11, 1932. The bean commonly used by the people of the island, who pronounce it excellent for cooking but not so palatable as the pigeonpea.

97894. White beans.

97895. Red spotted white beans.

97896. PHASEOLUS sp.

No. 46. Collected January 11, 1932, at Spanish Wells, Bahama Islands. A rather long small round podded bean growing at the edge of trails and cultivated land.

97897. STIZOLOBIUM ATERRIMUM Piper and Tracy. Fabaceae. Mauritius bean.

No. 2738. From St. Lucia, February 3, 1932. A black-seeded velvetbean bought in the market where it was sold as coffee.

97898. TABERNAEMONTANA sp. Apocynaceae.

No. 2595. Collected in Nassau, January 12, 1932. A shrub with fragrant white flowers which are followed by two fleshy pods which, as they split open, expose rows of brilliant orange seeds. The arillus stains one's fingers bright orange.

97899. TILLANDSIA sp. Bromeliaceae.

No. 2732. From St. Lucia, February 3, 1932. A large species with purple inflorescence which climbs to the top of large trees, completely covering them. There are more beautiful and showy species, but this is the most vigorous and abundant ever seen.

97900. TOLUIFERA PEREIRAE (Klotzsch) Baill. Fabaceae. Balsam-of-Peru.

No. 2650. From Port Orange, St. Eustatius, January 22, 1932. A handsome tree with glossy green foliage. It will probably be a good street tree.

For previous introduction see 66245.

97901. STEGNOSPERMA HALIMIFOLIUM Benth. Phytolaccaceae.

No. 2605. From Beata Island, Dominican Republic, January 17, 1932.

For previous introduction and description see 97580.

97902. ZIZIPHUS sp. Rhamnaceae

No. 2781. Collected January 25, 1932, in the Botanic Garden, Dominica. A large tree, a foot in diameter, with drooping branches and small greenish fruits the size of small marbles which are scarcely edible. Introduced for comparison with forms now growing in this country.

97860 to 97909—Continued

97903. (Undetermined.)

From Beata Island, Dominican Republic. Received without notes.

97904. PORTLANDIA DOMINGENSIS Britton. Rubiaceae.

No. 2624. Collected January 20, 1932, on Saona Island, Dominican Republic. A strand shrub with glossy evergreen leaves and large angular pods. Flowers not seen, but the shrub may be valuable for windbreak purposes.

97905. BUMELIA OBOVATA (Lam.) DC. Sapotaceae.

No. 2622. Collected January 20, 1932, on Saona Island. A handsome evergreen tree about 20 feet high, with dark-green coriaceous obovate leaves and small black sweet berries. As the tree was growing near the coast, it would be suitable for culture on wind-swept beaches, and may prove a good hedge or windbreak tree.

97906. (Undetermined.)

No. 2788. Collected January 20, 1932, on the strand of Saona Island. A tree with long glossy coriaceous leaves and a habit that may make it an excellent windbreak tree on salty land.

97907. (Undetermined.)

No. 2654. Collected on St. Kitts, January 24, 1932, at 1,700 feet altitude. A shrub with attractive bluish fruits borne in clusters on long pendent branches.

97908. LONCHOCARPUS sp. Fabaceae.

No. 2680. Collected on St. Eustatius, January 22, 1932. An attractive tree 50 feet high with a stately trunk and gray clean bark, but rather thin foliage. It may be useful as a street tree.

97909. LONCHOCARPUS sp. Fabaceae.

No. 45. Collected at St. Lucia, February 3, 1932. A small ornamental tree found in a dry situation.

97910 to 97918. Phoenicaceae. Palm.

From Surinam and British Guiana. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition to the West Indies. Received March 14, 1932.

97910. ASTROCARYUM PARAMACA Mart.

No. 3685. Purchased in the market at Paramaribo, Surinam, March 2, 1932. A low-growing very attractive shade-loving pinnate palm from 6 to 8 feet high, with the pinnae all in one plane. The inflorescence consists of a single central upright spadix to which the fruits are attached by a peduncle 1 inch long. The fruits are small, an inch long, with tiny black spines and a tough oily endosperm.

97911. ELAEIS MELANOCOCCA Gaertn.

No. 3683. Collected near Station Onverwacht, Surinam, March 3, 1932. A wide-spreading low palm which grows in damp situations. It is closely related to the African oil palm (*Elaeis guineensis*), and from the kernels a clear oil is extracted in small quantities by the natives, who prize it highly for cooking.

For previous introduction see 92196.

97910 to 97918—Continued

97912. ENGLEROPHOENIX REGIA (Mart.) Kuntze (*Maximiliana regia* Mart.).

No. 3684. *Maripa* palm. Purchased in the market at Paramaribo, Surinam, March 3, 1932. This is a massive pinnate palm up to 50 feet high, with persistent leaf petioles and immense leaves, reminding one of the *Cohune*. The subacid fruits have thin fleshy pulp and are much appreciated by the natives.

97913. EUTERPE EDULIS Mart. **Para palm.**

No. 3690. Collected at Paramaribo, Surinam, March 3, 1932.

For previous introduction and description see 97284.

97914. LIVISTONA HOOGENDORPII André.

No. 3651. From the Georgetown Botanic Garden, British Guiana, February 23, 1932. A form with black fruits.

For previous introduction and description see 97816.

97915. MAURITIA FLEXUOSA L. f.

No. 3652. From near Flagstaff, British Guiana, February 23, 1932. A palm, native to tropical Brazil, which grows to a height of 150 feet and 30 inches in diameter. The leaves are from 9 to 16 feet long. This is one of the so-called ivory-nut palms. The fruit is spherical, about the size of a small apple, and covered with small smooth reticulated scales. The spadix loaded with fruit is of immense weight, often more than two men can carry.

For previous introduction see 93533.

97916. PHOENIX sp.

No. 3658. Collected in the Botanic Garden, Georgetown, British Guiana, February 26, 1932. A low-growing form with scarcely any stem. The small red fruits turn black at maturity.

97917. LIVISTONA AUSTRALIS (R. Br.) Mart. **Australian fan palm.**

No. 3686. Collected March 4, 1932, in Paramaribo, Surinam. A tall slender palm from 30 to 40 feet high with smooth trunk, 8 to 10 inches in diameter, and a dense crown of circular leaves, 3 to 4 feet in diameter, divided nearly to the base into narrow plicate segments. The moderately hard light-colored wood is occasionally used for light construction work; the leaves are used for baskets; and the unexpanded fronds, after being dipped in boiling water, are dried, shredded, and the fiber is used in making hats resembling Panama hats.

For previous introduction see 80186.

97918. THRINAX sp.

No. 3689. Collected March 4, 1932, near Georgetown, British Guiana. A graceful palm with brilliant white fruit the size of marbles.

97919 to 97922. APIUM spp. Apiaceae.

From France. Seeds presented by Prof. D. Bois, Museum of Natural History, Paris. Received March 12, 1932.

97919. APIUM AMMI Urban.

A tropical annual with fusiform roots and either cespitose or with a branched stem 2 or 3 feet high. The leaves vary from linear to laciniate, and the small white flowers are in small umbels. Native to Brazil.

97919 to 97922—Continued

97920. APIUM GRAVEOLENS L. **Celery.**

Introduced for the use of Department specialists.

97921. APIUM NODIFLORUM Reichenb. f.

A perennial native to fields and open places in western Germany. The stem of this species does not take root at the internodes.

97922. APIUM REPENS Reichenb. f.

A perennial herb with coarsely pinnately cut leaves. The stem develops roots anywhere along the internodes. Native to swampy places in northern Germany.

97923. LONCHOCARPUS NICOU (Aubl.) DC. Fabaceae. **Nicou.**

From Peru. Roots presented by William J. Dennis, Des Moines, Iowa. Received March 22, 1932.

A woody vine, climbing to the tops of trees, with alternate compound leaves made up of about seven ovate sharp-pointed leaflets and axillary spikes of pea-shaped purple flowers. It is native to Guiana and Peru, where the roots are used as fish poison.

For previous introduction see 88328.

97924 to 97941.

From the West Indies and the Guianas. Seeds and scions collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 14, 1932.

97924. ALPINIA EXALTATA (L. f.) Roem. and Schult. Zinziberaceae.

No. 3676. March 3, 1932. Purchased in the market at Paramaribo, Surinam. The purplish-brown fruits of this plant are used to flavor curry sauce and to give it its yellow color. The flavor is superior to that of turmeric.

97925. ANANAS SATIVUS Schult. f. Bromeliaceae. **Pineapple.**

No. 2993. Purchased in the market at Georgetown, British Guiana, February 24, 1932. A long rather slender sugar-loaf shaped pineapple of a rather inferior flavor. Introduced for breeding purposes.

97926. ASYSTASIA GANGETICA (L.) T. Anders. Acanthaceae.

No. 2964. Collected at the Botanic Garden, Demerara, Georgetown, British Guiana, February 24, 1932.

For previous introduction and description see 97255.

97927 to 97930. CITRUS spp. Rutaceae.

97927 and 97928. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

97927. No. 3662. Scions and seed collected in the Javanese village of Lelydorp, near Paramaribo, Surinam, March 4, 1932. Very large pear-shaped fruits with thick skin, pink flesh, and pink partitions.

97928. No. 3663. Collected near Lelydorp, Surinam, March 4, 1932. Scions of a red-fleshed Javanese variety which is said to be sweeter than the variety sent in under 3662 (97927).

97924 to 97941—Continued

97929. CITRUS MEDICA L. **Citron.**

No. 2998. Collected at Georgetown, British Guiana, February 25, 1932. Scions of a peculiarly shaped citron which turns a deep-orange color as it ripens.

97930. CITRUS GRANDIS (L.) Osbeck. **Grapefruit.**

No. 3687. *Alamoen.* Collected at Paramaribo, Surinam, March 2, 1932. A flattened and irregular shaped grapefruit with a large cavity in the center, thick segment walls, and very tender follicles. Said to be the best grapefruit grown in Surinam.

97931. CROTALARIA JUNCEA L. Fabaceae. **Sunn-hemp.**

No. 3699. Collected March 1, 1932, at the Experiment Garden, Paramaribo, Surinam. A tall-growing species with yellow flowers.

For previous introduction see 81421.

97932. FICUS SALICIFOLIA Vahl. Moraceae. **Fig.**

No. 3656. Collected at the Georgetown Botanic Garden, British Guiana, February 24, 1932. A remarkable form of ficus with long linear to lanceolate leaves and small fruits not over a quarter of an inch through. The fruits are covered with chocolate spots, making them very attractive. The tree climbs and twines about itself, much as *Ficus aurea* climbs over its host tree.

97933. GMELINA ASIATICA L. Verbenaceae.

No. 2969. Collected in the Botanic Garden, Georgetown, British Guiana, February 25, 1932. A small tree with thorny drooping branches and odd-looking trumpet-shaped flowers of a bright lemon yellow. The fruits, about the size of a small plum, are creamy yellow, and as they lie untouched on the ground under the tree, we infer that they are not edible.

97934. IXORA LUTEA Hutchinson. Rubiaceae.

No. 2975. Collected February 25, 1932, in the Botanic Garden, Georgetown, British Guiana. An attractive form with light creamy-yellow flowers.

For previous introduction see 97770.

97935. MABA INCONSTANS (Jacq.) Griseb. Diospyraceae.

No. 3697. Collected on Pigeon Hill, Tobago, February 20, 1932. A form with edible fruits. To be tried as a stock for better varieties of persimmons.

For previous introduction see 97532.

97936 and 97937. MANGIFERA INDICA L. Anacardiaceae. **Mango.**

Purchased in the market at Paramaribo, Surinam, March 1, 1932.

For previous introduction see 97747.

97936. No. 3694. A medium-sized kidney-shaped mango with a pronounced scarlet blush. The very fibrous flesh has a flavor much like the Haden, although it is darker red and more purplish.

97937. No. 3695. A large nearly round mango of very good flavor.

97924 to 97941—Continued

97938. PETREA VOLUBILIS L. Verbenaceae.

No. 3653. Variety *alba.* Collected in the Botanic Garden, Georgetown, British Guiana, February 26, 1932. A woody climber native to tropical South America and the West Indies. The beautiful white flowers are borne in loose pendent sprays which hang gracefully from the slender arching branches. These combined with the rigid green leaves produce a striking effect.

For previous introduction see 81476.

97939. PLUMERIA RUBRA L. Apocynaceae. **Nosegay frangipani.**

No. 2806. Collected in the Botanic Garden, Grenada, Grenadine Islands, February 10, 1932. An immense tree which bears shell-pink flowers.

For previous introduction see 59647.

97940. RANDIA FORMOSA (Jacq.) Schum. Rubiaceae.

No. 2994. Collected along the Lamaba Canal in British Guiana, February 26, 1932.

For previous introduction and description see 97784.

97941. XYLOPIA FRUTESCENS Aubl. Annonaceae.

No. 3681. Collected March 3, 1932, at Onverwacht, Surinam. A peculiar-looking tree with glaucous blue-green leaves which are narrow lanceolate and pointed. Great masses of small fruits are produced. These have an aromatic taste, but are not bitter. This may prove of value as a shade or avenue tree.

97942 to 97949.

From Japan. Seeds presented by M. Tozawa, director, Forest Experiment Station, Keijo, Chosen. Received March 16, 1932.

97942. ABIES HOLOPHYLLA Maxim. Pinaceae. **Needle fir.**

A tall handsome fir, eventually 100 feet or more high, with stout spreading or ascending branches and dark-green foliage.

For previous introduction see 90649.

97943. ACER TRIFLORUM Komarov. Aceraceae. **Maple.**

For previous introduction and description see 97509.

97944. ALNUS HIRSUTA SIBIRICA (Fisch.) C. Schneid. Betulaceae. **Alder.**

A handsome tree, native to Siberia, 60 feet high of broad pyramidal habit and vigorous growth. The broadly ovate leaves, about 5 inches long, are dark green above and glaucous beneath.

For previous introduction see 90787.

97945. BUXUS MICROPHYLLA KOREANA Nakai. Buxaceae. **Box.**

A variety which differs from the usual form by its low stature, thicker leaves, and pubescent branchlets. It is native to Chosen.

97946. LARIX DAHURICA Turcz. Pinaceae. **Dahurian larch.**

Received as variety *Koreana.*

97942 to 97949—Continued

97947. PICEA JEZOENSIS (Sieb. and Zucc.) Carr. Pinaceae. **Yeddo spruce.**

A Japanese tree up to 150 feet high, with dark-gray bark and slender horizontally spreading branches. The leaves are silvery white above and dark green beneath, and the staminate flowers are orange crimson.

For previous introduction see 90666.

97948. PICEA KOYAMAI Shiras. (*P. koraiensis* Nakai). Pinaceae. **Spruce.**

A narrowly pyramidal tree 60 feet high, native to Japan and Chosen, with red-brown bloomy branchlets and compressed leaves half an inch long, with two white bands above. The pale-brown cylindrical cones are 2 to 3 inches long.

For previous introduction see 78404.

97949. PINUS TABULAEFORMIS Carr. (*P. leucosperma* Maxim.). Pinaceae. **Pine.**

A pine up to 75 feet high with dark-gray bark on the trunk, red on the branches, and orange or gray-yellow branchlets. The glaucescent leaves, usually two in a cluster, are stout and 3 to 6 inches long, and the ovoid cones, 2 to 4 inches long, are pale tawny yellow, changing to dark brown and persisting for several years.

For previous introduction see 90793.

97950 to 97968.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 7, 1932.

97950. ANNESLIA PURPUREA (L.) Britton (*Alliandra purpurea* Benth.). Mimosaceae.

No. 2757. Collected on Mayero Island, February 6, 1932. A very pretty shrub with handsome crimson flowers borne in heads on the gray shoots. It is suited to wind-swept situations near the sea.

97951. BIGNONIA sp. Bignoniaceae. **Trumpetcreeper.**

No. 2810. Collected in the Botanic Garden, Grenada, Grenadine Islands, February 7, 1932. An immense vine which has completely covered a giant saman tree. Introduced for comparison with the forms now growing in this country.

97952. CACTUS CAESIUS (Wendl.) Britt. and Rose. Cactaceae.

No. 2949. *Turkscap* or *melon* cactus. Collected in the Trinidad Botanic Garden, February 15, 1932. A less showy variety and with a less pronounced cap than *C. intertus*, No. 2628 (97564), but a dooryard curiosity that seems to interest many people.

97953. CAMOENSIA MAXIMA Welw. Fabaceae.

No. 2897. Collected in the Botanic Garden, Port-of-Spain, Trinidad, February 15, 1932. A strong-growing vine with delicately fragrant white flowers fringed with gold.

For previous introduction see 54805.

97950 to 97968—Continued

97954. CASSIA JAVANICA L. Caesalpiniaceae.

No. 2850. Collected in the Botanic Garden, Trinidad, February 13, 1932. *Apple blossom* cassia. A small tree, deciduous in the dry season, but covered with gorgeous pink flowers over 2 inches across borne in large clusters during the spring and early summer.

For previous introduction see 94185.

97955. CLITORIA RUBIGINOSA Juss. Fabaceae.

No. 2926. Collected at the Botanic Station at Scarborough, Tobago, February 19, 1932. A slender twining vine 10 feet tall. The flowers are said to be white with purplish-crimson veins, and 2 inches across. May prove of value as a cover crop.

For previous introduction see 48604.

97956 to 97958. CROTALARIA spp. Fabaceae.

97956. CROTALARIA INCANA L.

No. 2932. Collected February 19, 1932, along the sea wall at Scarborough, Tobago.

For previous introduction and description see 97872.

97957. CROTALARIA RETUSA L.

No. 2818. Collected February 10, 1932 on Grenada. A bushy species with yellow and red flowers, found growing in a very dry situation.

97958. CROTALARIA RETUSA L.

No. 2823. Collected in Dominica, Leeward Islands, January 30, 1932. A yellow-flowered species found along the roadside.

97959. DIOSPYROS IERENSIS Britton. Diospyraceae. **Persimmon.**

No. 2879. *Bois charbon.* Collected in the forest reserve, Trinidad, February 16, 1932. A medium-sized forest tree reaching a girth of 4 feet. The wood is blackish, and the small fruits 1½ inches in diameter are green to brown outside with dark flesh. Of possible use as a stock on which to graft the better varieties of persimmons.

97960. ENTADA POLYSTACHYA (L.) DC. Mimosaceae.

No. 2944. Collected February 20, 1932 at Tobago, Windward Islands. A strong-growing vine with dark-green pinnate leaves and rather inconspicuous flowers which are followed by interesting large papery pods 8 to 10 inches long and 2 inches or more wide. These pods break up into winged seeds that drop out from the persistent margins of the pods, leaving the margin like the rim of a picture frame.

For previous introduction see 92896.

97961. GALACTIA sp. Fabaceae.

No. 59. Collected January 18, 1932 on Beata Island, Dominican Republic. A vine found growing over a bush.

97962. HIBISCUS COLLINSII Hort. Malvaceae.

No. 2812. Collected February 10, 1932 in the Botanic Garden, Grenada. A small tree with large palmately-veined leaves; said to have white flowers, one petal of which is streaked with mauve.

97950 to 97968—Continued

97963. CAPSICUM FRUTESCENS BACCATUM (L.) Irish. Solanaceae. **Bush redpepper.**

No. 2880. From Port-of-Spain, Trinidad, February 17, 1932. An erect shrubby perennial about 3 feet high, with slender flexuose branches, small white flowers, and small red fruits about one fourth inch in diameter. Native to tropical America.

For previous introduction see 96503.

97964. MEIBOMIA CANA (Gmel.) Blake (*Desmodium supinum* DC.). Fabaceae.

No. 52. Collected February 6, 1932, on Cannouan, Grenadine Islands. A plant 12 to 18 inches high found growing on a very dry hillside. The small flowers are pink.

97965. MEIBOMIA CANA (Gmel.) Blake (*Desmodium supinum* DC.). Fabaceae.

No. 2936. Collected in the Botanic Garden, Tobago, February 19, 1932.

97966. PASSIFLORA RUBRA L. Passifloraceae.

No. 2952. Collected January 7, 1932, near Eleuthera Bluff, Eleuthera, Bahama Islands. A softly pubescent vine with crescent-shaped cordate leaves 2 to 4 inches broad, green-white flowers 2 inches across, and red fruits 2 inches long. It is native to the West Indies.

97967. (Undetermined.)

No. 2920. Collected near Argyle, Spring Village, St. Vincent, Windward Islands, February 5, 1932. A small evergreen tree with waxlike fragrant white flowers and showy scarlet berries one half inch in diameter.

97968. (Undetermined.)

From Port-of-Spain, Trinidad. An orchid with a very attractive delicate deep purple flower not over three eighths of an inch across. From the Huggins orchid collection.

97969 to 97974.

From Canada. Seeds presented by the Department of Agronomy, University of Manitoba, Winnipeg. Received March 12, 1932.

A collection of grasses introduced for pasture-research investigations by Department specialists.

97969. AGROPYRON TENERUM Vasey. Poaceae. **Slender wheatgrass.**

97970. DACTYLIS GLOMERATA L. Poaceae. **Orchard grass.**

97971. FESTUCA ELATIOR L. Poaceae. **Meadow fescue.**

97972. MEDICAGO SATIVA L. Fabaceae. **Alfalfa.**

97973. PHLEUM PRATENSE L. Poaceae. **Timothy.**

97974. TRIFOLIUM PRATENSE L. Fabaceae. **Red clover.**

97975 to 97986.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 15, 1932.

97975 to 97986—Continued

97975. BARRINGTONIA ASIATICA (L.) Kurz. Lecythidaceae.

No. 2803. Collected in the Botanic Garden on Grenada, Grenadine Islands, and on St. Vincent, Windward Islands, February 5, 1932. A handsome tree 50 feet high, with thick leathery leaves, bright green and a foot long, racemes of large showy flowers having white petals, and crimson-tipped stamens resembling a brush. The smooth shining black fruits are shaped like a 4-sided pyramid and are 3 to 4 inches long on each side. It is native to the East Indies.

For previous introduction see 93541.

97976. CEDRELA ODORATA L. Meliaceae. **Cigarbox-cedar.**

No. 2937. Collected in the Botanic Garden, Tobago, Windward Islands, February 19, 1932. The *West Indian* cedar or *Acajou*. A rapidly growing tree of beautiful appearance, the wood of which is used for the cigar boxes of commerce. The wood is soft, easily worked, sweet scented, and immune from the attacks of many insects.

For previous introduction see 94770.

97977. CENTROLOBIUM PARAENSE Tul. Fabaceae.

No. 2844. Collected February 13, 1932, in the Botanic Garden, Trinidad. *Porcupine* tree. A tree with large leaves and large curious fruits like gigantic maple seeds, with wings 6 inches long and which whirl as they fall. The egg-shaped basal portion, as large as a pullet's egg, is covered with spines like a sea-urchin.

97978 and 97979. DOLICHOS LABLAB L. Fabaceae. **Hyacinth-bean.**

Collected February 16, 1932, at Port-of-Spain, Trinidad.

97978. No. 2921. A small white variety which is used as food in Trinidad.

97979. No. 2922. A large-seeded variety which is not considered as good as the smaller-seeded one (No. 2921) [97978].

97980. LAGERSTROEMIA SPECIOSA (Muench.) Pers. (*L. flos-reginae* Retz.). Lythraceae. **Queen crapemyrtle.**

No. 2855. Collected February 13, 1932, in the Botanic Garden, Port-of-Spain, Trinidad. A tree 50 to 60 feet high, with leaves 4 to 8 inches long and large panicles of flowers which change color from rose to purple from morning to evening. This tree is native to eastern Bengal and India where it is cultivated as an avenue tree.

For previous introduction see 94194.

97981. OCHROSIA sp. Apocynaceae.

No. 2845. Collected February 13, 1932, in the Botanic Garden, Port-of-Spain, Trinidad. A tree with dark-green glossy leaves and brilliant showy red fruits.

97982. ALPINIA sp. Zinziberaceae.

No. 2919. Collected February 9, 1932, on Grenada, Grenadine Islands. Found in moist forest near Grand Etang at 1,500 feet altitude. Said to be a striking plant with colored bracts and showy scarlet flowers.

97975 to 97986—Continued

97983. COLA HETEROPHYLLA (Beauv.) Schott and Endl. Sterculiaceae.

No. 2847. The *Mahae*. Collected in the Botanic Garden, Port-of-Spain, Trinidad, February 13, 1932. A large tree found growing in very poor soil. Its wood is soft and light, 31 pounds per cubic foot, and is easily worked. The flowers are not showy, but the pods are bright scarlet, covered with stinging hairs. Introduced for trial as a street or windbreak tree.

97984. TERMINALIA ARJUNA (Roxb.) Wight and Arn. Combretaceae.

No. 2859. Collected February 13, 1932, in the Botanic Garden, Port-of-Spain, Trinidad. *Arjan*. A very large tree with smooth green or whitish bark, found on river banks throughout central and southern India. The leaves are narrowly oblong, about 9 inches long, and the flowers, which appear in April and May, are borne in terminal panicles. This tree yields a transparent gum which is used as a drug in northern India; the bark is used for tanning, and the wood is used for carts and agricultural implements.

For previous introduction see 66156.

97985. TERMINALIA BELLERICA (Gaertn.) Roxb. Combretaceae.

No. 2852. Collected February 13, 1932, in the Trinidad Botanic Garden. The small round fruits of this handsome tropical Indian tree have been exported from India for tanning purposes under the name myrobalans. The yellow-gray wood is used for general construction. The tree also has merit as a shade tree for avenues, with its huge buttressed trunk and long horizontal branches.

For previous introduction see 94080.

97986. WARSZEWICZIA COCCINEA (Vahl) Klotzsch. Rubiaceae.

No. 2856. Collected in the Botanic Garden, Port-of-Spain, Trinidad, February 13, 1932. An ornamental tree with dark-green foliage and clusters of small flowers each a quarter of an inch across. One sepal of each cluster is brilliant scarlet and 2½ inches long, making a startling splash of color against the dark leaves. The tree blooms during the wet season, whereas most of the showy flowering trees of the Tropics bloom in the dry season.

For previous introduction see 92197.

97987 to 98000.

From the Netherlands. Plants purchased from B. Ruys, Ltd., Royal Moerheim Nurseries, Dedemsvaart. Received March 16, 1932.

97987. STATICE sp. Plumbaginaceae.

Hybrid Gigantea. A plant about 3 feet high, with large flower heads of a clear-rose color. Excellent for cut flowers.

97988. ASTER FRIKARTII Hort. Asteraceae.

Said to be a globular plant 2 to 3 feet high, with very large sky-blue flowers having orange-yellow centers. It flowers from August to November.

97989 to 97991. CRINUM POWELLII Baker. Amaryllidaceae. **Powell crinum.**

A bulbous plant with about 20 spreading strap-shaped leaves 3 to 4 feet long

97987 to 98000—Continued

and usually 8 rose-colored flowers in large showy heads, terminating a scape a foot or more high. It is considered to be a hybrid between *C. longifolium* and *C. moorei*.

97989. *Album*. Flowers white.

97990. *Intermedium*. Flowers pink.

97991. Flowers dark rose.

97992. ERINACEA PUNGENS Boiss. Fabaceae.

A low deciduous shrub 12 to 15 inches high, native to the western Mediterranean region. The spatulate leaves, less than half an inch long, are borne only at the tips of the rigid pubescent branches, and the violet-blue pea-shaped flowers, 1 inch long, are borne in axillary clusters of one to three.

97993. HEDERA HELIX L. Araliaceae. **English ivy.**

Conglomerata minima. A very dwarf, creeping ivy, suitable for the rockery.

97994. ILEX ALTACLARENSIS Dallim. Aquifoliaceae. **Holly.**

Camelliaefolia. Leaves elliptic or oblong, acuminate, dark olive green, very glossy, entire or with a few spines near the apex.

97995. ILEX AQUIFOLIUM L. Aquifoliaceae. **English holly.**

Pyramidalis. A form with ascending branches, forming a narrow oblong head.

97996 to 98000. POTENTILLA spp. Rosaceae. **Cinquefoil.**

97996. POTENTILLA FRUTICOSA L. **Shrubby cinquefoil.**

Beesii. A very beautiful dwarf shrub with attractive silver-gray foliage and an abundance of rich canary-yellow flowers.

97997. POTENTILLA FRUTICOSA DAVURICA (Nestl.) Seringe. **Dahurian cinquefoil.**

A dwarf compact shrub less than 2 feet high, with small leaves having lustrous brown stipules tipped with a tuft of conspicuous hairs. The solitary yellow flowers are about 1 inch across

97998. POTENTILLA FRUTICOSA FRIEDRICHSENII (Spaeth) Rehd. **Friedrichsen cinquefoil.**

A form with rather large pubescent leaflets, glaucous beneath, and light-yellow flowers. It is considered to be a hybrid between *P. fruticosa* and *P. fruticosa davurica*.

97999. POTENTILLA FRUTICOSA PARVIFOLIA (Fisch.) Wolf.

A dwarf form with seven elliptic-oblong glabrescent leaves and pale-yellow flowers.

98000. POTENTILLA FRUTICOSA PYRENAICA Willd. (*P. prostrata* Lap.). **Alpine shrubby cinquefoil.**

A dwarf alpine form of dense habit, with small lanceolate leaflets and bright-yellow flowers.

98001 to 98009. CASTANEA MOLLISSIMA Blume. Fagaceae. **Hairy chestnut.**

From China. Seeds and scions collected by Peter Liu and sent through Owen L.

98001 to 98009—Continued

Dawson, agricultural commissioner, Shanghai. Received March 16, 1932.

98001. Seeds collected in the village of Leeyuan, north of Langshan. A very sweet yellow chestnut with a thin skin.

98002. *East mountain chestnut of Miyun.* Seeds purchased in a fruit shop at Miyun, 50 miles northeast of Peiping.

98003. Seeds purchased from a fruit dealer at Tangshan.

Nos. 98004 to 98006 are scions collected in the village of Heishanssu, northwest of Miyun.

98004. The *white dew* or *early chestnut of Miyun.* A chestnut which ripens early in September.

98005. The *middle ripening chestnut of Miyun.* This chestnut ripens about a week later than the one sent under 98004.

98006. The *late chestnut of Miyun.* A chestnut which ripens the middle of September.

Nos. 98007 to 98009 are scions collected in the village of Leeyuan, north of Tangshan.

98007. *Middle autumn* chestnut. A rather rare chestnut which ripens late in September.

98008. *Second ripening* chestnut. This chestnut is said to ripen about a week later than the white dew or early chestnut of Miyun (98004). It is the most commonly grown chestnut in this region.

98009. *White dew* or *early* chestnut. A chestnut which ripens early in September.

98010 to 98012.

From the Union of South Africa. Seeds presented by the McGregor Museum, Kimberley. Received March 11, 1932.

98010. ALOE SCHLECHTERI Schoenl. Liliaceae.

From Griqualand West. An aloe with olive-green leaves about 8 inches long, armed on the margin with brown horny deltoid prickles. The light-yellow flowers are in dense racemes about 6 inches long, on a short peduncle.

For previous introduction see 94242.

98011. ALOE sp. Liliaceae.

98012. TARCHONANTHUS MINOR Less. Asteraceae.

A strongly resin-scented shrub native to southern Africa, with oblong to obovate, entire leaves 1 to 2 inches long, and short racemes of small woolly flower heads. It is said to be a good stock feed and to be drought resistant.

For previous introduction see 94241.

98013 to 98017. GOSSYPIUM spp. Malvaceae. **Cotton.**

From the West Indies. Seeds collected by Gaines R. Wilson on Moires Island, Bahamas. Received February 26, 1932.

Bolls collected in the settlement on the western side of the island, and each boll is from a different plant.

98013 to 98017—Continued

98013. GOSSYPIUM sp.

No. 932.

98014. GOSSYPIUM sp.

No. 933.

98015. GOSSYPIUM sp.

No. 934.

98016. GOSSYPIUM sp.

No. 935.

98017. GOSSYPIUM sp.

No. 936.

98018 to 98022. GOSSYPIUM spp. Malvaceae. **Cotton.**

From the Bahamas. Seeds collected by Hugh M. Matheson at the request of David Fairchild. Received March 1, 1932.

98018. GOSSYPIUM sp.

No. 937.

98019. GOSSYPIUM sp.

No. 938.

98020. GOSSYPIUM sp.

No. 939.

98021. GOSSYPIUM sp.

No. 940.

98022. GOSSYPIUM sp.

No. 941.

98023 and 98024. AMYGDALUS PERSICA L. Amygdalaceae. **Peach.**

From Java. Seeds presented by A. M. Cramer, of Cramer & Zoon, Wonosobo. Received March 18, 1932.

A collection of local peach varieties introduced for the use of Department specialists.

98023. From a tree growing in the yard of Mr. Cramer at 4,400 feet altitude. The fragrant fruit is nearly round, well colored, and almost without bitterness. The average rainfall is 140 inches and the tree has a true resting period during the latter part of the dry season (July-September), when it is quite bare of leaves.

98024. Collected in native villages between 5,000 and 6,700 feet altitude. At the higher level frosts occur during the dry season, and the trees have a true resting period. The fruit is quite fragrant, but very bitter.

98025 to 98031.

From China. Seeds presented by G. Weidman Groff, Lingnan University, Canton. Received March 18, 1932.

98025. CITRUS SINENSIS (L.) Osbeck. Rutaceae. **Orange.**

No. 34. Purchased in the Fachow market, Fachow district, Kwangtung, December 28, 1931. A large round juicy sweet orange.

98026. FORTUNELLA sp. Rutaceae. **Kumquat.**

No. 35. Purchased in the Fachow market December 28, 1931. *Kat.* A wild flat fruit, not very plentiful in the market. Said to have come from the hills.

98025 to 98031—Continued

98027 to 98031. SEVERINIA BUXIFOLIA (Poir.) Ten. (*Atalantia buxifolia* Oliver). Rutaceae.

For previous introduction and description see 97334.

98027. No. 45. Collected in southern Kwangtung near the coast where it was subjected to brackish water.

98028. No. 48. Collected January 1, 1932, from upland areas in the vicinity of Kwangchowaan.

98029. No. 49. Collected January 1, 1932, from low salty lands near Chikhan, Kwangchowaan, southern Kwangtung.

98030. No. 50. Collected January 1, 1932, from the wall of Lonkong City, southern Kwangtung.

98031. No. 65. January 8, 1932. Large vigorous plants collected in the vicinity of Pakhoi, southern Kwangtung, in hedges and open patches in light sandy soil, not far from the sea.

98032 to 98044.

From Chile. Seeds collected near Ancud, Chiloe Island, by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Received March 8, 1932.

98032. BERBERIS BUXIFOLIA Lam. Berberidaceae. **Magellan barberry.**

No. 25. Collected January 25, 1932, in open country and sandy soil. An erect bushy partially evergreen barberry 6 to 8 feet high, with hard leathery oblong-obovate leaves up to an inch long, small solitary amber-yellow flowers, and globular dark-purple fruits. Native to southern Chile, where it is cultivated for its edible berries.

For previous introduction see 78917.

98033. EUPHORBIA LATHYRUS L. Euphorbiaceae. **Caper spurge.**

No. 27. Collected January 30, 1932, near Castro. A herbaceous plant 4 feet tall found in sandy soil in open situations. The stem contains an abundance of milky juice. It may prove of value as a rubber-producing plant.

98034. GUNNERA CHILENSIS Lam. Haloragidaceae. **Chilean gunnera.**

No. 19. *Nalca.* January 24, 1932. An herb 1 foot high found in open sandy soil, usually on steep slopes. The small orangelike fruit is on a branched fleshy fruiting receptacle. For use as an ornamental.

98035. LUPINUS ARBOREUS Sims. Fabaceae. **Tree lupine.**

No. 9. January 22, 1932. An ornamental herbaceous plant 4 feet high, found cultivated in the gardens of Ancud.

98036 and 98037. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

98036. No. 8. Collected January 20, 1932, and thought to be of Russian origin.

98037. No. 12. Said to be indigenous to Chiloe Island.

98038. RIBES sp. Grossulariaceae. **Gooseberry.**

No. 24. Collected January 31, 1932. A pink gooseberry about three fourths of an inch in diameter, with weak spines on the berry. Said to be indigenous to southern Chile.

98039. SOPHORA TETRAPTERA J. Miller. Fabaceae. **Fourwing sophora.**

No. 11. *Pelu.* A tree 20 to 30 feet high found in sandy soil at the edge of woods. The green pinnate leaves and large clusters of pale-yellow flowers make it an attractive ornamental.

98040. NERTERA DEPRESSA Banks and Soland. Rubiaceae.

No. 21. *Madresalva.* A procumbent herbaceous plant with red or orange-red berries, found growing in exposed places. Introduced as a rock-garden plant.

98041. MARGYRICARPUS SETOSUS Ruiz and Pav. Rosaceae.

No. 23. Collected January 23, 1932, on the sandy beach. A dwarf heathlike creeping evergreen shrub about 1 foot high, with odd-pinnate leaves, very small greenish flowers, and showy white berries which persist for some time. It is native to Peru.

For previous introduction see 91048.

98042. ENARGEA RADICANS (Ruiz and Pav.) F. Muell. Liliaceae.

No. 22. Collected January 23, 1932. An ornamental climbing woody vine with bright-orange berries. It is common in shaded situations, and the natives use it to make brooms and brushes.

98043. ARISTOTELIA CHILENSIS (Molina) Stuntz (*Aristotelia macqui* L'Her.). Elaeocarpaceae.

No. 18. A small ornamental tree 15 to 20 feet high, found in beach thickets. The purple fruit resembles the wild cherry.

98044. RHAPHITHAMNUS CYANOCARPUS (Bert.) Miers. Verbenaceae.

No. 20. Collected January 24, 1932, in a beach thicket. A hedge plant 5 feet high, with small glossy evergreen leaves and sharp thorns. It produces an abundance of small blue berries which make it very attractive. Horses as well as cattle eat this plant the year round and seem fond of it.

For previous introduction see 41494.

98045 to 98051.

From the West Indies and British Guiana. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 14, 1932.

98045. ERYTHRINA sp. Fabaceae.

No. 3700. Collected near Charlotteville, Tobago, Windward Islands, on a mountain side. A low tree with rather showy salmon-colored flowers an inch long, followed by curved pods a foot long.

98046. HIBISCUS sp. Malvaceae.

No. 3654. Collected February 26, 1932, near Georgetown, British Guiana. A wild species with attractive yellow flowers and pubescent leaves, found overhanging the narrow fresh-water canal through the peat savanna near Flagstaff, on the Lamaha Conservancy.

98045 to 98051—Continued

98047. LECYTHIS ZABUCAJO Aubl. Lecythidaceae. **Sapucaya nut.**

No. 2963. Collected February 15, 1932, on Trinidad. The sapucaya nut is native to the Amazon Valley and adjacent regions, and many people consider it even better flavored than the Brazil nut. The somewhat triangular-nuts are over 2 inches long and about an inch wide. They are borne in large woody urn-shaped capsules about 10 inches in diameter, with close-fitting lids at the top. The tree is a slow grower and requires a long time to reach the bearing stage.

For previous introduction see 92030.

98048. PASPALUM PLICATULUM Michx. Poaceae. **Black grass.**

No. 2941. Collected on Tobago, February 20, 1932. An upright cespitose perennial grass about 3 feet high. It is native to Uruguay.

For previous introduction see 62050.

98049. PASSIFLORA MOLLISSIMA (H. B. K.) Bailey. Passifloraceae. **Softleaf passionflower.**

No. 2995. Collected February 23, 1932, in the market at Georgetown, British Guiana. A yellow fruit about the size of an egg, with a rather soft flexible skin. The fruit is unusually aromatic, and the slightly acid flesh has a delightfully pleasant flavor.

98050. QUASSIA AMARA L. Simaroubaceae.

No. 2972. Collected in the Botanic Garden at Georgetown, British Guiana, February 23, 1932. A shrubby tree, native to tropical America. The opposite dark-green pinnate leaves have winged petioles and are made up of five elliptical leaflets with pink veins. The racemes of small crimson flowers are followed by ovoid black fruits about half an inch long.

98051. (Undetermined.)

No. 2989. Collected near Georgetown, British Guiana, on the Lamaha Canal, February 26, 1932. A large-leaved tree which bears greenish-yellow fruits the size of a large plum. The very small seeds are scattered through the slightly acid agreeable pulp.

98052 to 98056.

From the Union of Soviet Socialist Republics. Scions presented by V. P. Alekseev, plant introducer, Sukhum Subtropical Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus. Received March 19, 1932.

A collection of scions from Tuapse, northern Caucasus, introduced for the use of Department specialists.

98052 to 98055. JUGLANS REGIA L. Juglandaceae. **Persian walnut.**

98052. No. 135177.

98053. No. 135178.

98054. No. 135179.

98055. No. 135180.

98056. PYRUS sp. Malaceae. **Pear.**

No. 135181. *Cherkess.*

98057 to 98071.

From the West Indies. Seeds collected by David Fairchild and P. H. Dorsett, agricultural explorers, Bureau of Plant Industry, with the 1931–32 Allison V. Armour expedition. Received March 15, 1932.

98057. ALYSICARPUS VAGINALIS NUMMULARIFOLIUS (L.) Baker. Fabaceae.

No. 2792. Collected on Carriacou, Grenadine Islands, February 8, 1932, at 900 feet altitude. A low creeping annual legume which forms a mat of stems and foliage not over half an inch thick. It may prove a good legume to mix with lawn grass.

For previous introduction see 67838.

98058. CROTALARIA VERRUCOSA L. Fabaceae.

No. 2950. Collected on Tobago, Windward Islands, February 19, 1932.

For previous introduction and description see 97876.

98059. ERYTHRINA PALLIDA Britt. and Rose. Fabaceae.

No. 2914. The *coral* or *jumbie* bean. Collected February 16, 1932, from a very large tree at Port-of-Spain, Trinidad, that has triangular-shaped leaves; and the coral-red seeds, one fourth to one third black, are used for necklaces.

98060. ERYTHRINA sp. Fabaceae.

No. 2796. Collected February 9, 1932, on Carriacou, Grenadine Islands, near the Botanic Garden. A form with white flowers.

98061. MEIBOMIA CANA (Gmel.) Blake (*Desmodium supinum* DC.). Fabaceae.

No. 2861. Collected at Port-of-Spain, Trinidad, February 15, 1932.

For previous introduction and description see 97965.

98062. MUCUNA sp. Fabaceae.

No. 2895. Collected February 17, 1932, at Port-of Spain, Trinidad. A vine which covers tall forest trees. The yellow flowers are followed by large pods, 5 inches long and 2 inches wide, which certain 3 or 4 large decorative seeds. When young the pods are covered with stinging hairs, hence the name cow-itch.

98063. MUCUNA SLOANEI Fawc. and Rendle. Fabaceae. **Horse-eye bean.**

No. 2938. Collected on Pigeon Mountain, Tobago, February 20, 1932. A high-climbing woody vine, native to Florida and the West Indies. The trifoliolate leaves have thin ovate leaflets 3 to 6 inches long, silky pubescent beneath, and the yellow flowers, 2 to 3 inches broad, are borne in an umbellate cluster on a stalk about the length of the leaf petiole.

93064 and 98065. PHASEOLUS VULGARIS L. Fabaceae. **Common bean.**

Collected at Port-of-Spain, Trinidad, February 17, 1932.

98064. No. 54. Small black beans purchased in the market. They are said to be bush beans.

98065. No. 55. A locally grown red bush bean.

98057 to 98071—Continued

98066. PTEROCARPUS INDICUS Willd. Fabaceae. **Padouk.**

No. 2816. Collected in the Botanic Garden, Grenada, Grenadine Islands, February 10, 1932. A very attractive unarmed tree 40 feet high with long slender branches and long pinnate glossy green leaves. The seeds are borne in almost circular papery pods, with a wing running all the way around the circumference.

For previous introduction see 67589.

98067. TERAMNUS LABIALIS (L.) Spreng. Fabaceae.

No. 2927. Collected February 19, 1932, at the Tobago Botanic Station at Scarborough.

For previous introduction and description see 97887.

98068. TOUNATEA SIMPLEX (Vahl.) Taub. Caesalpiniaceae.

No. 2814. Collected in the St. George Botanic Garden, Grenada. A globular-headed tree about 20 feet high, with dull yellow-orange spindle-shaped pods containing one or two bean-shaped black seeds with a white arillus.

For previous introduction see 79545.

98069. FORESTIERA RHAMNIFOLIA Griseb. Oleaceae.

No. 2819. Collected February 10, 1932, on the driest part of Grenada. A tall shrub or small tree up to 30 feet high, native to the West Indies. The elliptical to obovate leaves are 2 to 4 inches long, and the inconspicuous flowers are followed by bright-blue ovoid fruits one half inch long, borne in axillary clusters.

98070. CAESALPINIA PAUCIJUGA Benth. Caesalpiniaceae.

No. 2828. *Braziletto wood.* From Port-of-Spain, Trinidad, February 13, 1932. A beautiful large spreading timber tree which is covered in season with small fragrant yellow flowers.

98071. QUARARIBAEA TURBINATA (Swartz) Poir. Bombacaceae. **Swizzle-stick-tree.**

No. 2805. Collected February 9, 1932, in the Botanic Garden of Grenada. A handsome shade tree with large dark-green leaves. The small white slightly fragrant flowers are borne in the leaf axils.

98072 to 98075.

From Australia. Seeds presented by the Queensland Acclimatisation Society, Brisbane. Received March 22, 1932.

98072 to 98074. CARICA PAPAYA L. Papayaceae. **Papaya.**

98072. *Hawaiian* variety.

98073. Selected seeds from the best varieties grown by the Society.

98074. Selected seeds from an improved variety grown by the Society.

98075. PASSIFLORA MOLLISSIMA (H. B. K.) Bailey. Passifloraceae. **Softleaf passionflower.**

For previous introduction and description see 98049.

98076 to 98086.

From France. Seeds presented by Vilmorin-Andrieux & Cie., Verrieres-le-Buisson. Received March 23, 1932.

98076 to 98082. COTONEASTER spp. Malaceae.

98076. COTONEASTER sp.

559–A.

98077. COTONEASTER sp.

719 Schneider.

98078. COTONEASTER sp.

Farrer.

98079. COTONEASTER sp.

2007 Hers.

98080. COTONEASTER sp.

2061 Hers.

98081. COTONEASTER sp.

2119 Hers.

98082. COTONEASTER sp.

4414 M. V.

98083. PTEROSTYRAX HISPIDA Sieb. and Zucc. Styracaceae. **Fragrant epaulette-tree.**

A tree up to 50 feet high, with slender spreading branches, obovate to oblong leaves 3 to 7 inches long, and fragrant creamy white flowers in pendulous panicles. Native to China and Japan.

98084. STACHYURUS CHINENSIS Franch. Stachyuraceae.

A shrub up to 15 feet high, native to central China. The ovate long-pointed leaves are 2 to 5 inches long and crenate-serrate on the margins. The yellow-green bell-shaped flowers appear in spring before the leaves and hang in racemes 2 to 4 inches long.

98085. ZANTHOXYLUM ALATUM PLANISPINUM (Sieb. and Zucc.) Rehd. and Wils. Rutaceae. **Prickly-ash.**

A Japanese shrub 7 to 13 feet high, much branched at the base, sometimes with a short trunk. The dark-brown spreading branches, drooping a little at the tips, bear stout straight spines in pairs and evergreen pinnate leaves, dark-green above and paler beneath. The small red fleshy fruits are persistent and emit a very agreeable aromatic odor when bruised. The shrub may be used as an ornamental or as a hedge plant.

For previous introduction see 64183.

98086. ZANTHOXYLUM sp. Rutaceae. **Prickly-ash.**

No. 7443 M. V.

98087 to 98096.

From Cuba. Material presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received March 23, 1932.

98087 to 98090. BOUGAINVILLEA sp. Nyctaginaceae.

98087. BOUGAINVILLEA sp.

Harvard No. 1.

98088. BOUGAINVILLEA sp.

Harvard No. 14.

98089. BOUGAINVILLEA sp.

Harvard No. 19.

98087 to 98096—Continued

98090. BOUGAINVILLEA sp.

Harvard No. 25.

98091. CAMOENSIA MAXIMA Welw. Fabaceae.

For previous introduction and description see 97953.

98092. PANDOREA RICASOLIANA (Tanf.) Baill. Bignoniaceae.
Ricasol pandorea.

An evergreen climbing shrub with pinnate leaves of 7 to 11 ovate-serrate leaflets an inch long, dark green above, pale beneath, and loose terminal panicles of large campanulate flowers 2 inches long, light pink striped with red. Native to southern Africa.

For previous introduction see 81186.

98093. SARACA INDICA L. Caesalpiniaceae. **Common saraca.**

A medium-sized Indian tree with pinnately compound leaves of 6 to 12 oblong leathery leaflets 6 to 9 inches long and fragrant orange-red flowers in compact panicles.

For previous introduction see 90890.

98094. TABEBUIA SAUVALLEI Britton. Bignoniaceae.

A shrub with papery compound leaves and terminal cymes of small dark-red flowers. Native to Trinidad, British West Indies.

98095. TABEBUIA SERRATIFOLIA (Vahl) Nicholson. Bignoniaceae.

An evergreen tree, native to the West Indies, with digitately compound leaves made up of 4 or 5 oblong-ovate leaflets 3 to 5 inches long and terminal panicles of yellow funnelform flowers.

For previous introduction see 62108.

98096. TERMINALIA MYRIOCARPA Heurck and Muell. Arg. Combretaceae.

A very valuable timber tree of northeastern Assam. It reaches a height of 80 to 100 feet, is deciduous, and the fruits ripen in January and February while the tree is bare.

For previous introduction see 94081.

98097. LYCOPERSICON ESCULENTUM Mill. Solanaceae. **Tomato.**

From Cuba. Seeds presented by Prof. J. G. Jack, from Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through T. A. Fennell, Bureau of Plant Industry. Received March 8, 1932.

Riñon. A rather small or medium-sized tomato, much flattened, oblately rounded or curved towards the stem, and much wrinkled. Professor Jack believes this is simply a degenerate form of the improved cultivated tomato which has become established as a wild plant in Cuba. It is said, however, to withstand very trying conditions and to grow luxuriantly at times when all other tomatoes fail.

98098 and 98099.

From Tasmania. Seeds presented by L. A. Evans, Hobart. Received March 7, 1932.

98098. INDIGOFERA AUSTRALIS Willd. Fabaceae. **Indigo.**

An erect Australian shrub 2 to 4 feet high, with pinnately compound leaves and

98098 and 98099—Continued

dense racemes of showy red flowers. It may be suitable for growing as an ornamental in the warmer parts of the United States.

For previous introduction see 77441.

98099. TRIFOLIUM REPENS L. Fabaceae. **White clover.**

The flowers have long pedicels.

98100 to 98136.

From Japan. Plants purchased from the Yokohama Nursery Co., Yokohama. Received March 24, 1932.

98100. ABELIA GRANDIFLORA Rehder, Caprifoliaceae. **Glossy abelia.**

A half-evergreen shrub 3 to 6 feet high, considered to be a hybrid between *A. chinensis* and *A. uniflora*. The ovate leaves, 1 to 2 inches long, are lustrous dark green above, and the pink-flushed white flowers, 1 inch long, are borne in leafy panicles during an exceedingly long period.

98101. ABELIA SPATHULATA Sieb. and Zucc. Caprifoliaceae.

A low deciduous shrub up to 4 feet high; native to Japan. The elliptic-lanceolate serrate leaves are 1 to 2 inches long, and the funnel-shaped flowers, 1 inch long, borne in axillary pairs, are white with a yellow throat.

98102 to 98133. ACER spp. Aceraceae. **Maple.**

98102 to 98109. ACER PALMATUM Thunb. **Japanese maple.**

98102. *Akikaze nishiki*; leaves green with irregular yellow variegation.

98103. *Aoba-no-fuye*; regularly palmate green leaves.

98104. *Atro-purpureum variegatum* (Toyama); deeply serrated dark-maroon leaves with white variegation.

98105. *Atropurpureum* (Nomura); deep-maroon, large regularly palmate leaflets.

98106. *Atropurpureum dissectum*; richly-fringed deep-maroon leaves inclined to droop.

98107. *Aureum*; roundish, obtusely cut yellow leaves.

98108. *Dissectum*; green leaves, richly fringed and inclined to droop.

98109. *Hatsuyuki*; broad, 5-lobed, white-margined leaves.

98110 and 98111. ACER JAPONICUM Thunb. **Fullmoon maple.**

98110. A shrub or small tree native to Japan. The 7- to 11-lobed cordate doubly serrate leaves, 3 to 6 inches across, are bright green in summer and turn crimson in the autumn. The purple flowers are borne in long-stalked nodding corymbs and are followed by winged fruits spreading nearly horizontally.

98111. *Filicifolium*. A form with leaves divided nearly to the base into 9 to 11 pinnatisect lobes.

98100 to 98136—Continued

98112. ACER NIKOENSE (Miquel) Maxim.

For previous introduction and description see 97504.

98113 to 98133. ACER PALMATUM Thunb. **Japanese maple.**

98113. *Nishikigasane;* palmate leaves, yellow variegated.

98114. *Nusatoriyama*; small 3-lobed leaves, white, very slightly pink shaded.

98115. *Okushimo*; small beautiful green leaves with involute margins.

98116. *Osakazuki*; leaves large, regularly palmate, light maroon changing to blood red in autumn.

98117. *Oshiu-beni*; leaves deep maroon, but more deeply cut and smaller than those of variety atropurpureum.

98118. *Reticulatum* (Shigitatsu); leaves with green veins on yellow ground.

98119. *Rosa-marginalis* (Hikasayama); crimson-margined small green leaves.

98120. *Roseum* (Kagiri); small palmate leaves margined with pink.

98121. *Sanguineum Chishio*; small leaves, blood red, regularly palmate.

98122. *Sanguineum Seigen*; blood-red palmate leaves, coloring in middle spring.

98123. *Scolopendrifolium* (Aoshime-no-uchi); green narrow leaves like a hartstongue fern.

98124. *Scolopendrifolium rubrum* (Akashime-no-uchi); red leaves with narrow lobes.

98125. *Shishigashira*; very curious rotate leaves.

98126. *Trifidum* (Tokayede); 3-lobed leaves changing to bright red in the autumn.

98127. *Tsumagaki*; small regularly palmate green leaves tipped with brown.

98128. *Tsuru-nishiki*; plain green, deeply cut ribbonlike leaves.

98129. *Uriha-nishiki*; broad melonlike green leaves with yellowish variegation.

98130. *Versicolor* (Oridono-nishiki); very attractive crimson leaves irregularly variegated with white and green.

98131. *Wabihito*; green leaves with featherlike lobes.

98132. *Washi-no-o*; leaves with long threadlike deeply serrated green lobes.

98133. *Atropurpureum variegatum*; bright-crimson leaves with deep-maroon variegation.

98134 and **98135.** PRUNUS MUME Sieb. and Zucc. Amydalaceae. **Japanese apricot.**

98100 to 98136—Continued

98134. A variety with double pink flowers.

98135. A variety with double red flowers.

98136. RHODODENDRON DEGRONIANUM Carr. (*R. metternichii pentamerum* Maxim.). Ericaceae.

A native wild form in Japan, differing in having a 5-lobed corolla. *R. metternichii* is an evergreen shrub up to 4 feet high with oblong leaves 3 to 6 inches long covered with rusty tomentum beneath. The campanulate, rose-colored, usually 7-lobed flowers are 1 to 2 inches across, spotted within with purple and are borne in clusters of 8 to 15.

98137. SCHEFFLERA ACTINOPHYLLA (Endl.) Harms. Araliaceae.

From Australia. Seeds presented by J. A. Hamilton, Carbeen, via Cairns, Queensland. Received March 23, 1932.

A handsome evergreen tree up to 40 feet high, native to Queensland, with compound leaves made up of 6 to 16 leathery oblong leaflets a foot long. The racemes, several feet long, of fragrant flowers are followed by small heads of angled dry fruits. This is a very good honey tree and does best in moist situations.

For previous introduction see 79145.

98138. CUCUMIS SATIVUS L. Cucurbitaceae. **Cucumber.**

From the Union of Soviet Socialist Republics. Seeds presented by Maj. C. R. Olberg, Tiflis, Transcaucasia. Received March 21, 1932.

A cucumber cultivated along the southern coast of the Caspian Sea, adjacent to Persia. It is 8 to 12 inches long and over 2 inches in diameter, with a smooth medium-green skin; the flesh is crisp and tender, of an indescribable flavor, and is eaten like an apple without any preliminary preparation except peeling.

98139 to 98161.

From England. Plants purchased from Edwin Beckett, Superintendent, Aldenham House Gardens, Elstree, Herts. Received March 25, 1932.

98139. ACER CAPPADOCICUM Gleditsch (*A. laetum* Meyer). Aceraceae. **Coliseum maple.**

For previous introduction and description see 95565.

98140. CALLICARPA KOREANA Hort. Verbenaceae.

A name for which a place of publication and a description have not been found.

98141. CALYCANTHUS FERTILIS Walt. Calycanthaceae. **Pale sweetshrub.**

A shrub up to 10 feet high, native to the eastern part of the United States from Pennsylvania to Alabama. The elliptic-ovate leaves, 2 to 6 inches long, are glaucous beneath and the green-purple to red-brown flowers are 1 to 2 inches across.

98142. CEANOTHUS sp. Rhamnaceae.

Topaze.

98139 to 98161—Continued

98143. BAILLONIA JUNCEA (Gill. and Hook.) Briquet (*Diostea juncea* Miers). Verbenaceae.

A shrub or small tree up to 20 feet high, native to Chile and Peru. The rushlike branches have distant pairs of small ovate dentate leaves, and the small pale-lilac flowers are borne in dense lateral and terminal spikes 1 to 2 inches long. The plant resembles *Spartium junceum* in habit.

98144. DREGEA SINENSIS Hemsl. Asclepiadaceae.

A woody vine, native to China, with ovate-cordate papery leaves, 2 to 6 inches long, smooth above and densely tomentose beneath. The white or pink milkweedlike flowers are half an inch long and are borne in ample cymes.

98145. FORSYTHIA INTERMEDIA DENSIFLORA Koehne. Oleaceae.

A form with spreading and pendulous branches, much crowded, flat, rather pale flowers with slightly recurved lobes.

98146 to 98148. LAVANDULA SPICA L. Menthaceae. **Lavender.**

98146. *Miss Duddington.* A charming variety with blue flowers.

98147. *Munstead blue.* An early flowering plant of bushy habit that produces many spikes of blue flowers.

98148. *Twickel purple.* A plant with fine bold foliage and good heads of deep-purple flowers.

98149 to 98152. LONICERA spp. Caprifoliaceae. **Honeysuckle.**

98149. LONICERA MUENDENIENSIS Rehder.

Considered to be a hybrid between *Lonicera bella* and *L. ruprechtiana,* closely resembling *L. bella,* but differing in having more acuminate and darker green leaves.

98150. LONICERA TATARICA L. **Tatarian honeysuckle.**

Punicea. A form with bright-red flowers.

98151. LONICERA TRICHOPODA Franch.

A low slender-branched shrub 3 to 5 feet high, native to Yunnan, China. The oblong-ovate pubescent leaves are 1 to 2 inches long, and the creamy white flowers, tinged with pink, are borne in axillary pairs and are followed by bright-red berries.

98152. LONICERA sp.

98153. PERTYA SINENSIS Oliver. Asteraceae.

A slender upright shrub 6 feet high, native to central China. The ovate to lanceolate entire leaves are 2 to 3 inches long, and the pinkish bell-shaped flower heads are solitary on slender pedicels.

98154 and 98155. GAYA LYALLII (Hook. f.) Baker f. (*Plagianthus lyallii* Hook f.). Malvaceae. **Lacebark.**

98154. For previous introduction and description see 97617.

98155. *Ribifolia.* A form with the leaves deeply lobed.

98156 and 98157. SORBUS AUCUPARIA L. (*Pyrus aucuparia* Ehrh.) Malaceae. **European mountain-ash.**

98139 to 98161—Continued

98156. A round-headed tree 20 to 40 feet high. The young branchlets are pubescent, becoming gray-brown with age. The leaves, 9 to 15 inches long, are composed of 11 to 13 oblong to oblong-lanceolate serrate leaflets entire towards the base, dull green above and pubescent beneath or rarely glabrous. The small white flowers are in flat corymbs 4 to 6 inches broad and are followed by bright-red globose fruits one third of an inch in diameter.

98157. *Fructu-luteo.* A form with yellow fruits.

98158. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

Veitch's Scarlet.

98159. RUSCUS ACULEATUS L. Convallariaceae. **Butchersbroom.**

Hermaphroditus. Said to be a form with perfect flowers, all of which bear fruits freely each year.

98160. VINCA DIFFORMIS Pourr. Apocynaceae. **Periwinkle.**

An evergreen subshrub with prostrate leafy branches and ascending flowering shoots. The ovate leaves are 1 to 3 inches long and the pale-lilac flowers, an inch across, are solitary in the upper axils. It is native to southern Europe and northern Africa.

For previous introduction see 92762.

98161. VINCA MINOR L. Apocynaceae. **Common periwinkle.**

La Grave. A form with pale-blue flowers.

98162 to 98164.

From Australia. Seeds presented by F. H. Baker, Richmond, Victoria. Received March 17, 1932.

98162. CALLISTEMON CITRINUS (Curtis) Skeels (*C. lanceolatus* DC.). Myrtaceae. **Lemon bottlebrush.**

An evergreen shrub up to 12 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. Native to southeastern Australia.

For previous introduction see 93832.

98163. HAKEA LAURINA R. Br. Proteaceae. **Sea-urchin hakea.**

A tall Australian shrub up to 30 feet high, remarkable for its showy crimson flowers. These are in globular heads about 2 inches in diameter, from which numerous golden styles protrude an inch or so in all directions.

For previous introduction see 95322.

98164. KENNEDIA MONOPHYLLA Vent. Fabaceae.

An Australian vine with single lanceolate leaflets and terminal panicles and axillary racemes of pea-shaped flowers ranging from white through rose to purple.

For previous introduction see 77970.

98165. CALYPTROGYNE OCCIDENTALIS (Swartz) G. Maza. Phoenicaceae. **Manaca palm.**

From Cuba. Plants presented by Robert M. Grey, superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos. Received March 28, 1932.

A beautiful and rare native palm with a straight smooth stem sometimes reaching a height of 50 feet. The pinnate leaves are 8 to 12 feet long.

For previous introduction see 90869.

98166. BROSIMUM UTILE (H. B. K.) Karst. (*B. galactrodendron* Don.). Moraceae. **Cow-tree.**

From the Republic of Panama. Seeds presented by H. S. Blair, Puerto Armuelles, Province de Chiriqui. Received March 17, 1932.

A large tree up to 75 feet high, native to Central America. The elliptic-ovate coriaceous leaves, 4 to 10 inches long, are green above and golden-brown beneath. The globose receptacles bear one staminate and one pistillate flower, the latter developing into a fleshy yellow 1-seeded fruit. When incisions are made in the bark a milky liquid flows out which is said to be nourishing.

98167 to 98194.

From Tunisia. Scions and seeds presented by the chief of the agricultural service, Tunis, at the request of Professor Bioletti and Prof. R. W. Hodgson. Received March 30, 1932.

98167. CERATONIA SILIQUA L. Caesalpiniaceae. **Carob.**

Scions of a hermaphroditic carob tree from Sfax.

98168 to 98173. MALUS SYLVESTRIS Mill. (*Pyrus malus* L.). Malaceae. **Apple.**

Scions of indigenous varieties of apples.

98168. *Bou Tubgaia* from Tabarka.

98169 to 98172. From Sfax.

98169. *Ghara.*

98170. *Halou.*

98171. *Meski.*

98172. *Mestiri.*

98173. An unnamed variety from Tunis.

98174 to 98176. PISTACIA spp. Anacardiaceae.

98174. PISTACIA TEREBINTHUS L. **False terebinth.**

Seeds of a locally grown variety.

98175 and 98176. PISTACIA VERA L. **Pistache.**

98175. Scions from a pistillate tree.

98176. Scions from a staminate tree.

98177. PRUNUS ARMENIACA L. Amygdalaceae. **Apricot.**

Amor-Leuch; scions from Sfax.

98178. PYRUS sp. Malaceae. **Pear.**

Scions of a native pear from the estate of M. Comte, at Sidi Bou Ali.

98179 to 98193. VITIS VINIFERA L. Vitaceae. **European grape.**

Scions collected at the School of Agriculture in Tunis.

98167 to 98194—Continued

98179. *Baioudi Khchin.*

98180. *Basegin blanc.*

98181. *Beldi.*

98182. *Chaouch rose.*

98183. *Sekesli.*

98184. *Hami,* a thick-skinned type.

98185. *Hami,* a tough-skinned type.

98186. *Kaali (Kahli).*

98187. *Marsiliane.*

98188. *Medina.*

98189. *Muscat de Pantellana.*

98190. *Olivette blanche.*

98191. *Antigua.*

98192. *Arricha.*

98193. *Vedifiren.*

98194. ZIZIPHUS JUJUBA Mill. Rhamnaceae. **Common jujube.**

Scions of a locally grown variety.

98195. PYRUS SALICIFOLIA Pall. Malaceae. **Willow-leaved pear.**

From the Union of Soviet Socialist Republics. Seeds presented by V. P. Alekseev, plant introducer, Sukhum Subtropical Branch of the All-Union Institute of Plant Industry, Sukhum, Caucasus. Received March 24, 1932.

No. 135191. From Azerbaidjan, Divichinskii District, village of Balidji. Collected by Rubtjor on an Asiatic expedition for the Institute of Plant Industry. A round-headed tree 20 to 25 feet high, with a short stout trunk and beautiful willow-like grayish to silvery leaves, 1 to 3 inches long, scarcely more than half an inch wide. The dense corymbs of white flowers are borne freely in April.

For previous introduction see 51885.

98196. SPINACIA OLERACEA L. Chenopodiaceae. **Spinach.**

From Africa. Seeds presented by Moses Albert Azancot, Tangier, Morocco. Received March 24, 1932.

A variety of spinach appreciated for its large size.

98197 to 98199.

From Scotland. Seeds presented by William Robb, director of research, Scottish Society for Research in Plant Breeding, Corstorphine, Midlothian. Received March 25, 1932.

A collection of forage grasses introduced for the use of Department specialists.

98197. DACTYLIS GLOMERATA L. Poaceae. **Orchard grass.**

No. Cc 1.

98198. LOLIUM PERENNE L. Poaceae. **Perennial rye-grass.**

No. Ca 1.

98199. PHLEUM PRATENSE L. Poaceae. **Timothy.**

No. Cb 1.

98200 to 98219.

From the Union of Soviet Socialist Republics. Seeds presented by M. P. Petrov, director, Repetek Sand Desert Station (Turkmenistan), Sand Desert Karakum, through the Institute of Plant Industry, Leningrad. Received March 21, 1932.

These seeds have been introduced as of possible value in experiments being carried on in the arid regions of the southwestern United States.

98200. AGRIOPHYLLUM MINUS Fisch. and Mey. Chenopodiaceae.

No. 134844. An annual, native to sandy deserts in Turkmenistan, with sessile linear-subulate leaves and inconspicuous axillary flowers.

For previous introduction see 92959.

98201. AGROPYRON ORIENTALE LASIANTHUM Boiss. Poaceae. **Wheat-grass.**

No. 134855. An annual grass, thickly branched at the base, with numerous mostly prostrate stems scarcely 8 inches high. Native to Asia Minor and northern Africa.

For previous introduction see 64092.

98202. AMMODENDRON CONOLLYI Bunge. Fabaceae.

No. 134846. An evergreen silky leaved Siberian shrub, used as a sand binder.

For previous introduction see 94923.

98203. ARISTIDA PENNATA KARELINI Trin. and Rupr. Poaceae. **Grass.**

No. 134848. A perennial grass of possible value as a forage crop.

For previous introduction see 94924.

98204. ARISTIDA PENNATA MINOR. Litv. Poaceae. **Grass.**

No. 134847. A perennial grass of possible value as a forage crop.

For previous introduction see 92965.

98205. ATRIPLEX DIMORPHOSTEGIA Kar. and Kir. Chenopodiaceae.

No. 134852. An annual 18 inches high with alternate membraneous ovate leaves and terminal or axillary inconspicuous flowers. Native to dry regions in Arabia and Persia.

For previous introduction see 92968.

98206. BROMUS TECTORUM L. Poaceae. **Bromegrass.**

No. 134854. An annual grass, to be tested as a ground cover.

For previous introduction see 92969.

98207 to 98209. CALLIGONUM spp. Polygonaceae.

98207. CALLIGONUM CAPUT-MEDUSAE Schrenk.

No. 134841. A leafless shrub with dichotomus branches, small reddish flowers in the axils of the sheaths, and nutlike fruits covered with filamentous reddish spines. Possibly of value as an ornamental in desert regions and as a sand binder. It is native to western Asia.

For previous introduction see 94928.

98208. CALLIGONUM COMOSUM L'Her.

No. 134839. A densely branched shrub 10 to 15 feet high, with minute subulate leaves and small ovate, densely spiny, nutlike fruits. Native to the eastern Mediterranean region.

For previous introduction see 94930.

98209. CALLIGONUM SETOSUM Litv.

No. 134840. A leafless shrub much like *C. caput-medusae*, but the filaments on the fruits are brownish and are longer and more slender. It is native to the Caspian region.

For previous introduction see 92974.

98210. CAREX PHYSODES Bieb. Cyperaceae.

No. 134837. A perennial sedge usually about 6 inches high, rarely more, native to sandy deserts of Turkistan, with filiform leaves and panicles of brownish globose membranous perigynia or sacs half an inch across.

For previous introduction see 94933.

98211. CONVOLVULUS DIVARICATUS Regel and Schmalh. Convolvulaceae.

No. 134842. A densely hairy, erect or ascending plant, with small ovate acute sessile leaves two fifths of an inch long and very small terminal or axillary flowers. Native to sandy places near Khiva, central Asia.

For previous introduction see 92976.

98212. EPHEDRA ALATA Decaisne. Gnetaceae.

No. 134851. A tall, freely-branching shrub with rough green equisetumlike branches, small scalelike leaves, and inconspicuous flowers. Native to Arabia and northern Africa. Of value as a possible source of ephedrine.

For previous introduction see 94934.

98213. EREMOSPARTON FLACCIDUM Litv. Fabaceae.

No. 134850. A bushy tree about 15 feet high, native to sandy places in the trans-Caspian region. The branchlets are threadlike and limp, and the small flowers are dark violet.

For previous introduction see 94935.

98214. FERULA LITWINOWIANA K.-Pol. Apiaceae.

No. 134845. A low hairy herbaceous perennial with numerous small triangular pinnately cut leaves and inconspicuous flowers in compound umbels. Native to the trans-Caspian region.

For previous introduction see 92983.

98215. HALOXYLON AMMODENDRON (Meyer) Bunge. Chenopodiaceae. **Saxaul.**

No. 134838. A shrub or tree up to 20 feet high, native to Turkistan. It has a gnarled trunk, light-green branchlets which are leafless, and small fruits with thin papery suborbicular wings.

For previous introduction see 92964.

98216. KOCHIA STELLARIS Moq. Chenopodiaceae.

No. 134853. An erect annual plant from the Desert of Karakum, Turkistan, a foot or less high, much branched, with flat linear leaves and very small greenish flowers.

98200 to 98219—Continued

98217. RHEUM TURKESTANICUM Janschew. Polygonaceae.

No. 134836. A wild rhubarb from the trans-Caspian region over 2 feet high, with a large thick rhizome and a short thickened densely leafy stem. The cordate reniform leaves, up to 8 in number, are about a foot wide.

For previous introduction see 92987.

98218. SALSOLA ARBUSCULA Pall. (*S. richleri* Hort.). Chenopodiaceae.

No. 134835. A shrub up to 15 feet high, native to Turkistan, with linear leaves 3 inches long and inconspicuous flowers. It is used as a sand binder along the trans-Caspian railway.

For previous introduction see 92989.

98219. SALSOLA SUBAPHYLLA Meyer. Chenopodiaceae.

No. 134834. A leafless, much-branched shrub about a foot high, native to desert places on the shores of the Caspian Sea.

For previous introduction see 92990.

98220 to 98229.

From the Union of South Africa. Seeds presented by F. Walton Jameson, city engineer, Kimberley. Received March 22, 1932.

98220. CALLITRIS JUNIPEROIDES (L.) Dur. and Schinz. Pinaceae.

A widely branched tree 20 to 60 feet high, with spirally arranged glaucous-green leaves less than an inch long. The moderately hard yellowish wood is used for making furniture. It is native to the Cedarburg Mountains of South Africa at 3,000 to 4,000 feet altitude. This region has cold damp winters and hot dry summers.

98221. CALLITRIS SCHWARZII Marloth. Pinaceae.

A handsome tree of pyramidal habit up to 50 feet high, with horizontal branches. It is closely related to *C. cupressoides*, differing in the structure of the cones and in being a larger tree. Native to the Cape of Good Hope.

98222. CARISSA GRANDIFLORA (E. Mey.) DC. Apocynaceae.

A handsome shrub, native to southern Africa, which is now cultivated in southern Florida and California as an ornamental hedge plant and for its scarlet edible berries.

For previous introduction see 41504.

98223. DOVYALIS CAFFRA (Hook. and Harv.) Warb. Flacourtiaceae.
Kei-apple.

A very prickly shrub or small tree, native to tropical Africa, where it is used as a hedge. The pale-green leaves are over an inch long and nearly an inch wide. The edible fruit resembles a small yellow apple and is so exceedingly acid when fresh that it is said to be used as a pickle without vinegar.

For previous introduction see 44847.

98224. HARPEPHYLLUM CAFFRUM Bernh. Anacardiaceae.

Kaffir plum. An evergreen tree with beautiful dark-green foliage. The timber resembles mahogany and is used for wagon making; the Dutch call it eschenhout. The fruit is a red showy drupe with a pleasant acid taste but little pulp. The branches of the tree are sometimes planted as fence posts, and these large "cuttings" take root and form trees. It is not a desert tree, but it will stand some drought.

For previous introduction see 34943.

98225. LEUCADENDRON ARGENTEUM (L.) R. Br. Proteaceae.

Witteboom or *silver-leaf pine.* A handsome evergreen South African tree native only in the vicinity of Cape Town. The narrow white-silky leaves, up to 7 inches long, are commonly used as curios and for bookmarks.

For previous introduction see 73031.

98226. NAGEIA ELONGATA (Ait.) Kuntze (*Podocarpus elongatus* L'Her.). Taxaceae.

Common yellow-wood. An evergreen slow-growing timber tree which becomes 80 to 100 feet high and 3 to 4 feet in diameter, with narrow leaves less than 2 inches long. The fine-grained wood is light, soft, moderately strong, elastic, and of a pale yellow-brown; it is largely used for furniture. This tree is the largest, most plentiful, and one of the most useful trees of Cape Colony.

For previous introduction see 56196.

98227. NAGEIA THUNBERGII (Hook.) F. Muell. (*Podocarpus thunbergii* Hook.). Taxaceae.

A fine evergreen timber tree, up to 100 feet tall and with a trunk 4 feet in diameter, which occurs throughout all the timber forests from Cape of Good Hope to Natal. The quality of the wood of this species is very similar to that of *Nageia elongata*, and for most purposes they are used interchangeably.

For previous introduction see 57267.

98228. PALLASIA CAPENIS Christm. (*Calodendrum capensis* Thunb.). Rutaceae.

A large and handsome tree with spreading branches in pairs or in threes. The ovate evergreen opposite leaves are 3 to 4 inches long. The white flowers, with linear-oblong reflexed petals 1 to 2 inches long, are in terminal panicles, and the shining black seeds, the size of hazelnuts, are borne in hard thick capsules. It is native to southern Africa.

For previous introduction see 80667.

98229. SPARMANNIA AFRICANA L. f. Tiliaceae.

A handsome flowering shrub up to 12 feet or more high, with heart-shaped obscurely 5- to 7-lobed leaves about 5 inches long. The handsome white flowers, over an inch across, which appear in May are borne in small umbels in such profusion that this is considered one of the finest white-flowered plants in existence. It is native to southern Africa.

98230 to 98255.

From Leningrad, Union of Soviet Socialist Republics. Seeds presented by V. P. Alekseev, Division of New Cultures and Foreign Plant Introduction of the All-Union Institute of Plant Industry. Received March 21, 1932.

98230 to 98255—Continued

98230 and 98231. BUTIA CAPITATA × ERIOSPATHA. Phoenicaceae. **Palm.**

For previous introduction and description see 95661.

98230. No. 135152.

98231. No. 135153.

98232. CASTANEA SATIVA Mill. Fagaceae. **Spanish chestnut.**

No. 135154.

98233 to 98237. CORYLUS AVELLANA L. Betulaceae. **Filbert.**

98233. No. 135171. **98236.** No. 135174.

98234. No. 135172. **98237.** No. 135175.

98235. No. 135173.

98238. JUGLANS REGIA L. Juglandaceae. **Persian walnut.**

No. 135176. Collected near Aibga village, at 5,000 feet altitude.

98239. PRUNUS AVIUM L. Amygdalaceae. **Sweet cherry.**

98230 to 98255—Continued

No. 135192. From Tebezda, northern Caucasus.

98240 to 98255. PYRUS COMMUNIS L. Malaceae. **Common pear.**

98240. No. 135155. **98248.** No. 135163.

98241. No. 135156. **98249.** No. 135164.

98242. No. 135157. **98250.** No. 135165.

98243. No. 135158. **98251.** No. 135166.

98244. No. 135159. **98252.** No. 135167.

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98256. CASTANEA CRENATA Sieb. and Zucc. Fagaceae. **Japanese chestnut.**

From Japan. Seeds presented by N. Suyetake, through the American consul, Tokyo. Received March 31, 1932.

No. 9371. *Otanba.*

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